



## CHENNAI METRO RAIL LIMITED

(A JOINT VENTURE OF GOVERNMENT OF INDIA AND GOVERNMENT OF TAMILNADU)

### TECHNO COMMERCIAL TENDER TWO COVER SYSTEM

**INTERIOR WORKS SUCH AS WARDROBE AND KITCHEN FOR THE  
STAFF QUARTERS AT CMRL DEPOT, KOYAMBEDU, CHENNAI  
600107**

**Cover – A – TECHNICAL PART**

### PART - A: QUALIFICATION CRITERIA

**DATE OF SUBMISSION OF TENDER - 19-06-2017 UP TO 14.00 Hours**

**DATE OF OPENING OF TENDER - 19-06-2017 UP TO at 14.30 Hours**

#### TO BE SUBMITTED TO:

**The JOINT GENERAL MANAGER (DESIGN)**  
**Chennai Metro Rail Limited**  
 Admin. Building, CMRL Depot  
 Poonnamallee High Road ,  
 Koyambedu, Chennai - 600107

#### TENDER SUBMITTED BY:

**M/s.**\_\_\_\_\_

**Address**\_\_\_\_\_

\_\_\_\_\_

**CHENNAI METRO RAIL LIMITED**  
(A JOINT VENTURE OF GOVERNMENT OF INDIA AND GOVERNMENT OF TAMILNADU)

**TECHNO COMMERCIAL TENDER**

(TWO COVER SYSTEM)

**INTERIOR WORKS SUCH AS WARDROBE AND KITCHEN FOR THE  
STAFF QUARTERS AT CMRL DEPOT, KOYAMBEDU, CHENNAI 600107**

**CONTENTS**

**Notice inviting Tenders**

**Information and Instructions to Tenderer**

1. General
2. Brief Description of Project
3. Summary of Important Conditions of Contract
4. Eligible TENDERER for applying.
5. Qualifying Criteria for the contractor
6. Site Visit
7. Submission of TENDER documents
8. Particular Attention
9. Final Decision Making Authority
- 10. Qualification Information**
  - 10.1.** Appendix A : Letter of Transmittal
  - 10.2.** Qualification requirements
    - Format – A : Structure and Organization of TENDERER
    - Format – B : Key Personnel to be deployed
    - Format – C : Financial Information
    - Format – D : Details of Completed works
    - Format – E : Details of Ongoing works
    - Format – F : Plant, machinery & Equipment

**CHENNAI METRO RAIL LIMITED**

**INTERIOR WORKS SUCH AS WARDROBE AND KITCHEN FOR THE  
STAFF QUARTERS AT CMRL DEPOT, KOYAMBEDU, CHENNAI 600107**

**NOTICE INVITING TENDER**

**Tender Notice No: -----**

**Name of Work:**

Interior works such as wardrobe and kitchen for the staff quarters at CMRL Depot, Koyambedu, Chennai 600107, under the two cover system from the Contractors who meet the following criteria:

**The TENDERER to be eligible for Qualification, should fulfill the following qualifying criteria:**

1. Tenderer should have satisfactorily completed the works as mentioned below during the **last seven years** ending last day of the month **31<sup>st</sup> March 2017**. The works completed upto previous day of last date of submission of tenders shall also be considered  
  
Three similar works each costing not less than **Rs 66,00,000/- (Sixty six lakhs only)**  

**Or**

Two similar works, costing not less **Rs 99,00,000/- (Ninety nine lakhs only)**  

**Or**

One similar work, costing not less than **Rs 132,00,000/- (One crore thirty two lakhs only)**
2. Tenderer should have satisfactorily completed interior works of at least one building covering the area of 1,00,000 Sqft of housing / Commercial Project as a Principle Contractor for the Central Government Department/ State Government Department/ Central Autonomous Body/ State Autonomous Body/ Central Public Sector Undertaking/ State Public Sector Undertaking/City Development Authority/ Municipal Corporation of City formed under any Act by Central/ State Government and published in Central/State Gazette. The experience certificate testifying satisfactory completion is to be obtained from the Engineers not below the rank of Chief Engineer concerned / Director or equivalent and the Notarized copy should be enclosed.
3. The **TENDERER** should have an average annual turnover of **Rs.50,00,000/-** (Rupees Fifty lakhs only) in the field of Interior and its associated works during the past three consecutive financial years, ending on 31st March, 2017.
4. Should not have incurred any loss in the last two years ending 31st March 2017 and the same should be certified by Chartered Accounts.
5. The TENDERER should produce Bankar's Solvency Certificate or Revenue Solvency Certificate for the Value of **Rs 66, 00,000/-** (Rupees Sixty six lakhs only). Solvency certificate must have obtained not earlier than 31<sup>st</sup> March 2017.
6. Should have adequate material & equipment resources to complete the works within the scheduled period, for which the TENDERER should assure, fill and submit the appropriate Format 'F' in the pre-qualification document duly signed.



**CHENNAI METRO RAIL LIMITED  
CHENNAI 600107, INDIA**

**NIT No. CMRL/CON / DSQ2/ IW/ 0001/ 2017**

CMRL invites sealed National Competitive Bid (NCB) under two cover (Technical & Financial) system for the works as detailed below:

1	Name of work	Tender No: DSQ2/ IW/ 0001/ 2017 SQ-02, Interior works such as wardrobes and kitchen for the Staff quarters at CMRL Depot, Koyambedu, Chennai - 600 107 for Chennai metro Rail Limited, Chennai.
2	Tender Security Amount (EMD)	INR 2.5 lakhs (Rupees Two lakhs Fifty Thousand only)
3	Tender validity	40 (Forty) days from the date of submission of tender
4	Validity of Tender Security Amount	60 (Sixty) days from the date of submission of tender
5	Duration of Contract (Completion period of the work)	60 Days
6	Tender Documents on sale	From 18.05.2017 to 16.06.2017 (between 10:00 hrs to 17:30 hrs) on working days.
7	Cost of Tender Documents (Non-refundable)	1. The Tender documents can be downloaded from the internet, if so desired (see below for website details). There will be a non-refundable Tender submission fee for this contract package at Rs. 20,000/- (Rupees Twenty Thousand only) including TNVAT in the form of DD in favor of Chennai Metro Rail Limited payable at Chennai to be submitted along with the bid.  2. A hard copy of the complete tender documents is available on payment of non-refundable fee 16,000/- (Rupees Sixteen Thousand only) including TNVAT from CMRL office in the form of DD in favor of Chennai Metro Rail Limited payable at Chennai.
8	Pre-bid Meeting	02.06.2017 at 11:00 Hrs.in the CMRL Conference Room. Address: Chennai Metro Rail Limited, Administrative Building, CMRL Depot, Poonamallee High Road, Koyambedu, Chennai- 600107 Tel no: 044 23792000 Fax no: 044 23792200 Email id: jgmcivil.cmrl@tn.gov.in
9	Last Date of issuing addendum for pre-bid	08.06.2017.
10	Date and Time of submission of Tender	19.06.2017 (up to 14:00 hrs) at office of the Joint General Manager (Design), Address as mentioned in item no.8 above.
11	Date and Time of opening of Tender (At the place of submission)	19.06.2017 at 14:30 hrs
12	Authority and place of purchase of Tender Documents	Joint General Manager (Design) , Chennai Metro Rail Limited, Administrative Building, CMRL Depot, Poonamallee High Road, Koyambedu, Chennai- 600107
13	Bidders barred from bidding for this work	The bidder or JV partner have not abandoned any contract executed for Government Metro Rail Corporation and none of the contracts executed by the bidder or JV partner have been terminated by the Government Metro Rail Corporations prior to this bid submission.
14	Website from which Tender Documents and any additional information can be downloaded	<a href="http://www.chennaiemrtrorail.org">www.chennaiemrtrorail.org</a>

Note: If the date of submission of tenders happens to be a public holiday, Tenders will be received and opened on the next working day at the same venue and time.

**Director (Projects)  
Chennai Metro Rail Limited**

the Tenderers at various locations in the document. It is advisable that the downloaded tender documents are printed through laser printer only. The submission of Xerox or Photocopies of the Tender documents is not permitted.

2. Tenderer are free to download the tender documents at their own risk, for the purpose of perusal as well as the same Tender documents for submitting their offers. A Master copy of the tender documents is available at CMRL's office. After award of the contract, an agreement will be prepared based on the Master copy of the Tender Documents. In case of any discrepancy between the tender documents downloaded from the website and the Master copy, the latter shall be prevail and will be binding on the Tenderer. No Claim on this account will be entertained.
3. The following declaration should be signed by Tenderers, who have downloaded the Tender Documents from the web site, when submitting their Tender:

**4. Declaration:**

I / We have downloaded the Tender forms from the CMRL's Website [www.chennaiemtorail.gov.in](http://www.chennaiemtorail.gov.in) or [www.tenders.tn.gov.in](http://www.tenders.tn.gov.in) and I have not tampered / modified the tender forms in any manner. In case if the same is found to be tampered / modified. I / We understand that my / our tender will be summarily rejected and the EMD deposited will be forfeited and I am/ we are liable to be banned from doing business with CMRL and / or prosecuted.

5. **The tenderer can purchase the tender document from the Office of CMRL, Koyambedu and payment to be made towards the tender document in the form of demand draft** for the sum as mentioned above, drawn from any Nationalized or Scheduled Banks in India payable at Chennai, in favour of the - **Chennai Metro Rail Ltd**, Chennai 600107 , Tamil Nadu, India,
6. **Without the submission of cost of tender document (in the form of DD) prior to or along with the tender, the tender will not be considered for evaluation.**

CMRL reserves the right to accept / reject any one / all the tenders without assigning any reason thereof.

**Director (Projects)  
Chennai Metro Rail Ltd**

**INFORMATION AND INSTRUCTIONS TO TENDERER****1. GENERAL**

- 1.1. The Works comprises Interior works such as wardrobe and kitchen for the staff quarters at CMRL Depot, Koyambedu, Chennai 600107,

TENDER DOCUMENT in hard copy can be obtained from the office of the **The Joint General Manager (Design)** India from 18-05-2017 to 16-06-2017 upon payment of non-refundable amount of **Rs.16,000/-** including tax, in the form of Demand Draft, obtained from any Nationalised / Scheduled banks in India, payable at Chennai, drawn in favour of the **Chennai Metro Rail Ltd**, Chennai 600107. Tender documents can also be downloaded from the above website, for which the cost of tender document will have to be paid in the form of demand draft for **Rs.20,000/-** drawn from any Nationalized or Scheduled Banks in India payable at Chennai, in favour of Chennai Metro Rail Limited, Chennai. Without the submission of cost of tender document (in the form of DD) prior to or along with the tender, the tender will not be considered for evaluation. In case of Private firms, CMRL has to right to scrutinize the original bill certificate, Payment made in the name of concern firm etc.

- 1.2. Letter of Transmittal and information required for Qualification shall be submitted as per **Appendix “B”** attached.
- 1.3. TENDERS are not transferable.
- 1.4. All information called for, shall be furnished against the respective columns in the enclosed form. If the space in the format is insufficient for furnishing full details, separate sheets may be used duly stating the reference to the format and serial number therein. Separate sheets shall be used for each format. If information is furnished in a separate document, reference to the same should be given against respective column(s). If information is ‘Nil’ it should also be mentioned as “Nil” or “No such case”. If any particular query is not applicable to the TENDERER it should be stated as “Not applicable”. However, the TENDERERS are cautioned that not giving complete information called for in the Tender in the form required or not giving it in clear terms or making any change in the prescribed forms may result in disqualification of the TENDERER.
- 1.5. The tender should be submitted in English only. Supporting documents such as Annual accounts, Balance sheets, Employer's Certifications, Testimonials etc., if attached in any other language should be translated in English duly attached.
- 1.6. The Tender Document shall be submitted in **duplicate** in typewritten / handwritten form. The TENDERER'S signature and seal of the firm shall appear on each page of the Tender.
- 1.7. Overwriting shall be avoided. Mistakes shall be scored through and corrections incorporated and attested by the authorized signatory. All pages of the TENDER document shall be signed and submitted in a single packet along with a signed letter of transmittal.
- 1.8. References, Information and Certificates from the respective Employers' certifying for performance and suitability, technical know-how or capability of the TENDERER shall be signed by the authorized signatory of Employer.
- 1.9. The TENDERER is advised to furnish any additional information, which they think is necessary in regard to their capabilities. No further information will be entertained after submission of TENDER document, unless it is called for by the Employer.
- 1.10. Tender Document details and enclosures shall be submitted in sealed envelopes and

addressed to **The Joint General Manager (Design), Chennai Metro Rail Limited, Admin Building, CMRL Depot, Poonnamallee Road, Koyambedu, Chennai - 600107, Tamil Nadu, India** as detailed above. Tender submitted late will not be opened. All times and dates mentioned in this Tender Notice and application are Indian Standard Time (IST) only. The same will be followed for communication and other purposes.

- 1.11. Documents submitted in connection with the Tender, will be treated as CONFIDENTIAL and will not be returned.
- 1.12. The cost incurred by TENDERERS in preparing their Tender, in collecting information, in providing clarifications or attending discussions, conferences or in making presentations, site visit etc. in connection with this TENDER will not be reimbursed by the Employer under any circumstances
- 1.13. Any clarification given by the Employer on his own will be forwarded to all those who have purchased TENDER documents / attended the pre Tender meeting.
- 1.14. The Employer reserves the right to reject any or all TENDERS, without assigning any reasons whatsoever and without incurring any liability to whomsoever.
- 1.15. Canvassing or influencing in any form will entail disqualification.
- 1.16. The Employer reserves the right to approach individuals, employers, companies and corporations to verify TENDERER'S competency and general reputation.
- 1.17. Tenderers who's work got terminated in CMRL will not be considered.

## 2. BRIEF DESCRIPTION OF PROJECT :

The Works comprises Interior works for one bed room and one Kitchen of each residential unit of Combined Supervisory and Non-Supervisory Staff Quarters at Koyambedu .

- 2.1. The period of completion of the work will be 2 months from the date of award of work.
- 2.2. All construction documents, prepared by the Contractor shall be reviewed and approved by the Employer / Employer's representative before commencement of procurement and construction. All works shall have to be carried out, in compliance with Bill of Quantities, Conditions of Contract, Technical Specification, Preamble and tender Drawings, relevant Indian standard (IS) Codes, International Codes and local bye-laws.

## 3. SUMMARY OF CONDITIONS OF CONTRACT:

- 3.1. The Contract shall be item rate contract with unit rates, to be quoted in Indian Rupees only.
- 3.2. Since the project is to be implemented strictly on the time schedule, the employer may extend the deadline for submission of tenders *by* issuing an amendment in which case, all rights and obligations of the Employer and Tenderer previously *ensured in* the original deadline, will then be shifted to the new deadline. The Employer will lay high emphasis on the capacity of the selected contractor to deploy high-tech and speedy construction techniques, high degree of planning, good procurement and quality check procedures, quality assurance Plan, Environment and Safety Plan to meet the appropriate standards, execution and co-ordination, ability to prepare PERT network and adhering to it meticulously.
- 3.3. Therefore the TENDERERS are required to demonstrate with firm examples of deployment of above techniques in their previously completed project.

**4. ELIGIBLE TENDERERS :**

- 4.1.** The firms applying for eligibility should have extensive experience and proven track record in Civil Construction and associated works.
- 4.2.** The Tender made by a partnership firm, shall be signed by all the partners of the firms above their full typewritten / handwritten names and current addresses, or alternatively by a partner holding Power of Attorney for the firm, in which case, a certified copy of the Power of Attorney shall accompany the Tender. A certified copy of the deed, full names and current addresses of all the partners of the firm shall also accompany the Tender. (\*)
- 4.3.** The Tender made by a firm shall be signed by Authorized signatory but appropriate evidence should be enclosed for authorizing the signing person in the tender document. (\*)
- 4.4.** The financial Tenders of only those Tenderer, who fulfill the eligibility criteria mentioned in the Notice Inviting Tender and mentioned in Clause No.5 below, will be only opened.
- 4.5.** Any change in the legal status of a TENDERER subsequent to submission of Tender will be subject to approval of **the Employer**
- 4.6.** TENDERERS under joint Venture arrangements are not permitted.

**Note: (\*) denotes requirement of enclosure(s) along with Tender.**

**5. QUALIFYING CRITERIA FOR THE CONTRACTOR**

Tenderer should have satisfactorily completed the works as mentioned below during the **last seven years** ending last day of the month **31<sup>st</sup> March 2017**. The works completed upto previous day of last date of submission of tenders shall also be considered

Three similar works each costing not less than **Rs 66,00,000/- (Sixty six lakhs only)**

**Or**

Two similar works, costing not less **Rs 99,00,000/- (Ninety nine lakhs only)**

**Or**

One similar work, costing not less than **Rs 132,00,000/- (One crore thirty two lakhs only)**

- 5.1** Tenderer should have satisfactorily completed interior works of at least one building covering the area of 1,00,000 Sqft of housing / Commercial Project as a Principle Contractor for the Central Government Department/ State Government Department/ Central Autonomous Body/ State Autonomous Body/ Central Public Sector Undertaking/ State Public Sector Undertaking/City Development Authority/ Municipal Corporation of City formed under any Act by Central/ State Government and published in Central/State Gazette. The experience certificate testifying satisfactory completion is to be obtained from the Engineers not below the rank of Chief Engineer concerned / Director or equivalent and the Notarized copy should be enclosed.
- 5.2** The **TENDERER** should have an average annual turnover of **Rs.50,00,000/-** (Rupees Fifty lakhs only) in the field of Interior and its associated works during the past three consecutive financial years, ending on 31st March, 2017.
- 5.3** Should not have incurred any loss in the last two years ending 31st March 2017 and the same should be certified by Chartered Accounts.
- 5.4** The TENDERER should produce Bankar's Solvency Certificate or Revenue Solvency



Certificate for the Value of **Rs 66, 00,000/-** (Rupees Sixth six lakhs only). Solvency certificate must have obtained not earlier than 31<sup>st</sup> March 2017.

- 5.5 Should have adequate material & equipment resources to complete the works within the scheduled period, for which the TENDERER should assure, fill and submit the appropriate Format 'F' in the pre-qualification document duly signed.
- i) That the TENDERER / Firm shall have a minimum Key Staff of one Project Manager and other Engineers with qualification and field experience as listed below. Exclusively for carrying out this Project, other than the supporting staff for executing the work without any complications.

1	Project Manager:	1 No. (One) with Degree in Civil Engineering with at least 10 (Ten) Years' experience in executing similar type of Jobs.
2	Site Engineers:	1 Nos. (One) with degree / Diploma in Civil Engineering possessing (Civil) experience in handling such projects including Interior and finishing works
3	Safety Engineer	1 No (one) with graduate / Diploma in safety Engineering minimum five years' experience.

Other Key Personnel required for this work in their respective fields shall be furnished in the **Format 'B'**. Details of other engineering Personnel in various categories that the TENDERER has proposed to appoint for this project, shall also be furnished. (\*)

A penalty at the rate of Rs.1,00,000 per person per month will be levied for non-availability of the key personnel at site.

**Note: (\*) denotes requirement of enclosure(s) along with Tender.**

## 6. SITE VISIT:

The TENDERER shall, prior to submission of the tender for the work at his own responsibility and risk, visit and examine the site of work & its surroundings with prior intimation to **the Employer** for proper assessment of the prospective assignment. The TENDERER should refer to the enclosed drawings also.

The Tenderer Should make himself familiar with the works already executed / being executed at site and plan for suitable measures for transition of works.

## 7. SUBMISSION OF TENDER DOCUMENTS :

- 7.1 Sealed Tenders should be addressed to the Director (Projects) Chennai Metro Rail limited, Admin Building, CMRL Depot, Poonnamallee High Road, Koyambedu, Chennai 600 107, and superscripting the name of the Tender on the top left hand corner of the cover and the name of the TENDERER on the bottom left hand corner of the cover and sent so as to reach him not later than 15-00 hours on \_\_-05-2017.
- 7.2 **The Tender shall be two cover system / Two part tender system, Cover - A the Technical and Qualification Tender along with EMD and Tender document fee if downloaded and Cover - B Price Tender. Both the Parts, each in separate sealed Covers - A & B have to**

**be submitted together put in a common sealed cover.**

- 7.3 All Tenderer who fulfill the eligibility condition will be eligible for opening for their financial proposals. The Employer shall notify all technically qualified tenderers to attend the opening of the financial proposal. The financial proposal will then be opened in presence of all tenderers.
- 7.4 Cover - A (Technical and Pre-Qualification document ), of the Tender document consists of Part - A,B&C pertaining to Qualification criteria (A), Conditions of Contract (B) and Technical Specification (C) and Cover - B Price Tender of Tender document, pertaining to *Bill of Quantities* shall be submitted in **duplicate i.e. one original and one copy**. *All the other enclosures that the TENDERERS wish to submit shall also be in duplicate. (Note: Part - C Technical Specification: Duplicate copy need not be submitted.)*
- 7.5 All **Tender Drawings** duly signed and affixed with the seal of the TENDERER shall be returned in a separate cover (only one set).
- 7.6 The Tender document shall be submitted in duplicate. The original Tender document issued to the TENDERER shall be marked '**Original**' and copy marked '**Duplicate**'. Should there be any discrepancy/is, in filling / write-up among the original and the copy of the Tender documents, the 'Original' shall be given effect and the duplicate copy is subject to be amended as per 'Original'.
- 7.7 A Tender which is not accompanied by EMD and tender document fee if downloaded in the approved form in a separate envelope attached to the sealed cover will be rejected.
- 7.8 The duly sealed Tenders shall be submitted to the Employer after superscribing the name of work, Tender Part No., and name of TENDERER, so as to reach him not later than the due date and time specified above.
- 7.9 No indication of Tender value or any financial aspect of Tender shall be made in any manner in any of the enclosures, covering letter etc. in Cover- A containing Part- A,B & C (Technical and Qualification Tender). If so, such Tender will be rejected.
- 7.10 Documents submitted in connection with the Tender will not be returned.
- In addition to the identification required above, the inner envelopes shall include the name and addresses of the TENDERER to enable the Tender to be returned as unopened, in case it is declared late.
- 7.11 If the outer envelope is not sealed and marked as above, the employer will assume no responsibility for misplacement or premature opening of the tender and the tender will be treated on the grounds of not substantially responsive.
- 7.12 To be eligible for Qualification, TENDERERS shall provide, evidence to the suitability of their meeting the Criteria indicated in Clause – 5.0 above and furnish details giving their full bio-data, organization, technical experience, plant and equipments etc. to establish their capacity and competence, and possession of adequate resources to carry out the contracts effectively and for this, the TENDERS submitted shall include the following:
- 7.13 Letter of transmittal; as in **Appendix - B. (\*)**
- i. Copies of original documents defining the legal status of the TENDERER, its structure and organisation, place of registration and principal place of business of the TENDERER in the **Format – A. (\*)**
  - ii. The qualification and experience of key personnel proposed for the administration and execution of the contract, both on and off site in the format prescribed in **Format – B. (\*)**

- iii. Details of Financial Information in **Format – C. (\*)**
- iv. Details of completed works of similar nature in **Format – D** as at date of Tender. **(\*)**
- v. Details of on-going works of similar nature in **Format – E** as at date of Tender. **(\*)**
- vi. Details of Plant, machinery & equipment in **Format – F. (\*)**
- vii. Details of termination of contract by Employer, if any, in **Format – G. (\*)**
- viii. Certificates in support of suitability, technical know-how and capability for having successfully completed the works during the last five years under **Annexure ‘A’**. **(\*)**
- ix. A detailed description on the approach methodology to the construction technology proposed, schedule and type of equipment to be used, names and responsibilities and detailed qualifications of the proposed sub-contractors, if any, etc. **(\*)**
- x. A detailed description of any method of approach specially devised by the Contractor to speed up the work. **(\*)**
- xi. Details of cases of having been barred or black listed from the Tendering process, if any. Black-listed Agencies’ Tender is liable to be rejected. **(\*)**
- xii. The TENDERERS are required to make a presentation on their organisation, infrastructure, project-scheduling, performance, capabilities etc., upon request from the Employer .
- xiii. The TENDERERS for qualification shall provide all facilities to the Employer for verification of the information / details furnished by them and also for inspection of their works carried out / in progress, if requested.

**Note: (\*) denotes requirement of enclosure(s) along with Tender.**

#### **8. PARTICULAR ATTENTION :**

The **EMPLOYER** reserves his rights to disqualify any TENDERER if:

- a) The TENDERERS have made untrue or false representation in the forms, statements and attachments submitted in proof of the qualification and requirements ;
- b) The TENDERER’s track record of poor performance such as abandoning the work, not properly completing the Contract, inordinate delays in completion or financial failures etc.
- c) The TENDERERS have suits lodged / admitted / pending against it in a Court of Law for proceedings for declaration of Bankruptcy, etc or any suit, which challenges the basic existence of the TENDERER and substantially influences its capacity to implement the **Works** satisfactorily. Information on the legal matters is to be submitted as per **FORMAT – H. (\*)**

**Note: (\*) denotes requirement of enclosure(s) along with Tender.**

#### **9. FINAL DECISION MAKING AUTHORITY:**

- 9.1.** After opening the outer envelope containing the Tender, its contents shall be examined for compliance in pursuant to clause 5.0, in the presence of the TENDERERS or their authorized representatives, who choose to be present, at 15.30 hours on the Last Date of receipt of Tender Documents. Tenders found not complying are liable to be rejected without further examination. The contents of envelope titled “Technical Tender” will be opened first and its contents shall be scrutinized as per requirements of Tender documents. Only for the TENDERERS, whose contents of technical tender have been found in order and evaluated as

substantially responsive, the envelope titled “Financial Tender” shall be opened, at the same address in the presence of TENDERERS or their authorized representatives, who choose to be present at the time and date of opening of the tender. This intimation will be sent to those TENDERERS whose technical tenders are found to be in order and evaluated as substantially responsive.

- 9.2. Tenders determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer. Where there is discrepancy between the unit rates in figures and in words, *the rates in words only*, will govern. The amount stated in the tender will be adjusted by the Employer *in* accordance with the above procedure for the correction of errors.
- 9.3. **The Employer** reserves the right, to accept or reject any Tender or to reduce the scope / cancel the exercise without having to incur any cost or to assign any reason for its decision to any party whatsoever, and **the Employer’s** decision on qualifying contractors will be final and binding on all the contractors.

Date of Submission

Authorized Signature of TENDERER with Official seal

## Appendix - A

## LETTER OF TRANSMITTAL

Date:

To  
**The Joint General Manager (Design)**  
**Chennai Metro Rail Limited**  
 Admin Building, CMRL Depot,  
 Poonnamallee High road,  
 Koyambedu, Chennai 600 107.

Sir,

**Sub: Submission of Techno Commercial Tender for the Interior works such as wardrobes and Kitchen for Staff Quarters at Depot, Koyambedu, Chennai 600 035.**

- a) I / We ....., having examined the details given in the Invitation to TENDERERS, we hereby submit the following information and relevant documents.
- b) I / We hereby certify that all the statements, information and data provided in the enclosed formats A to G. and accompanying statements are true and correct to the best of my / our knowledge.
- c) I / We ..... have read the instructions appended with the qualification document and I / We understand that any contract made between ourselves and **the Employer** on the basis of the information given by me / us, is liable to be cancelled , if any false information is detected at a later date.
- d) I / We .....have also no objection, if enquiries are made on all the projects and works listed by me / us, in the accompanying sheets or any other enquiry, on the information furnished herewith in the accompanying sheets.
- e) I / We have furnished all information and details as asked for and have no further pertinent information to provide.
- f) I / We also authorise **the Employer**, to approach individuals, employers, companies, and corporation to verify my / our competency and general reputation.
- g) I / We submit in Annexure 'A' the certificates in support of my / our suitability, technical know-how and capability for having successfully completed the works during the last five years.
- h) I / We also agree that the decision of **the Employer**, in the Qualification and selection of Contractors will be final and binding upon me / us.
- i) I / We agree that **the Employer** reserves the right to qualify any contractor or to cancel the exercise without assigning any reason for doing so or to incur any liability to any party whatsoever.
- j) I / We agree not to withdraw from the contract after issue of LOA and before signing the agreement. If so, we attendee by the condition that liquidated damages shall be claimed against us by **the Employer**

k) The following are enclosed as enclosures to the letter of transmittal :

1. Certificate of Incorporation from Registrar of Companies
2. Memorandum of Association
3. Annual Report / Audited Balance Sheet & Profit and Loss Statement for the past 3 years
4. Registration with Govt. Departments or Public Bodies.
5. Solvency Certificate from Bankers for the value of Rs 66,00,000/- dt not earlier than 31<sup>st</sup> March 2017
6. Sales Tax / Works Contract Tax / VAT / PAN Registration certificate.
10. PERT Charts and quality Formats used at site such as pour card for Concrete etc, referred in **Formats 'D' & 'E'**
11. Testimonials from Employers / Consultants for completion of works included in **Format - D**
12. LOI / Work Order issued by the Employers for ongoing works included in **Format - E**
13. Organization Chart of Company showing the Officer in-Charge who will have direct link with and control of, site organization.
14. Organization Chart and Curriculum Vitae of Key staffs.
15. Method Statement: Programming & Planning and Progress monitoring plan, weekly and monthly ; Management of Direct Sub-Contractors from selection through execution of work; Coordination with Specialist contractors ,if any, etc. ;Quality control & quality Assurance at site; Safety Plan
16. Formats 'A' to 'H' with complete details., and any certificates other than that listed above.

I / we hereby agree to abide by the decisions of **the Employer** in all matters, relating to this Qualification.

**Place :**

**Authorized  
Signature of the TENDERER**

**Date :**

**Common seal of the Company**

**QUALIFICATION REQUIREMENTS**

1.	Do you satisfy requirement of Clause : 1	Yes / No
2.	Do you satisfy requirement of Clause : 2	Yes / No
3.	Do you satisfy requirement of Clause : 3	Yes / No
4.	Do you satisfy requirement of Clause : 4	Yes / No
5.	Do you satisfy requirement of Clause : 5	Yes / No
6.	Do you satisfy requirement of Clause : 6	Yes / No
7.	Have you enclosed necessary Documentary evidence for all items	Yes / No

Place :

***Authorized***  
**Signature of the TENDERER**

Date :

**Common seal of the Company**

**FORMAT – A****STRUCTURE AND ORGANISATION OF TENDERER**

<b>S.No.</b>	<b>Details required</b>	<b>To be filled by the Building Construction Company</b>
1	Name of the TENDERER's Company	
2	Nationality of TENDERER	
3	Establishment of the Company	
	i) Year	
	ii) Location	
4.	The TENDERER is a company (Please enclose attested copy of registration / incorporation under appropriate laws of the TENDERER's country)	Yes / No  Enclosed
5	Address of the TENDERER :	
i)	Registered Office Address	
	Telephone Number	
	Fax Number	
	E-mail Address	
	Web site	
ii)	Local office address in India , if any:	
	Telephone Number	
	Fax Number	
	E-mail Address	
iii)	Office address through which this work will be handled and name of officer in-charge.	
	Telephone Number	
	Fax Number	
	E-mail Address	
6	Enclose Company's Organisation Chart showing the structure of the organisation including the names of the Directors / Chief Executive Officer and position of Officers.	
7	Number of years of experience and other Details.	



a.	As a Principal Contractor (Contractor shouldering major responsibility)	Yes / No
	i. In own country	Yes / No No. of Years :
	ii. Other countries (If yes, pl. specify country)	Yes / No No. of Years : Country :
8(a)	Average number of permanent employees in the last 12 months.	
	i) Managerial	Nos.
	ii) Technical	Nos.
	iii) Administration	Nos.
	iv) Skilled Labours	Nos.
	v) Un Skilled Labours	Nos.
	vi) Others ( to specify)	1. Nos. 2. Nos. 3. Nos.
9(b)	xii) Apprentices / Trainees	Nos.
10	Whether registered with any Government / Public Sector Undertaking / Local bodies like CPWD or equivalent applicable in the TENDERER's country.  If yes, please furnish details class and type of Registration.	1. Yes / No. 2. 3.
11	Registration Details :	
	i) Sales Tax Registration No or equivalent applicable in the TENDERER's country & Valid upto	
	ii) PF Registration No or equivalent applicable in the TENDERER's country & Valid upto	
	iii) ESI Registration No or equivalent applicable in the TENDERER's country & Valid upto	
	iv) Service Tax registration No or equivalent applicable in the TENDERER's country & Valid upto	
12	Whether adequate and satisfactory evidence to indicate financial capacity of the organisation to undertake the said construction work is enclosed.	Yes / No
13	Do you have experience in Modern technology of manufacture and execute large span steel roof structure / concrete structure / Cast in situ or precast structure/Flat slab/If yes, please furnish the details.	1. Yes / No. 2. 3.

14	Do you have your own Ready mix concrete facility?  If yes, pl. give details of location and its production capability in terms of quantity per day.	Yes / No.  Location :  Production : Cum/Day
15	i) Do you have and adopt Quality Control and Quality Assurance Manual?	Yes / No Enclose QA Plan
	ii) Is your company an ISO certified Company? If yes, please furnish the ISO certification no.	Yes / No
	iii) Do you follow Quality Assurance System as per the appropriate ISO series of standards?	Yes / No
16	i) Do you have and follow Safety Manual?  If yes, please give details of health and safety facilities available with you.	Yes / No Enclose Environmental Health and Safety Plan.
	ii) Was there any major, fatal accident occurred at any of your Sites during execution in the last five years? If yes, furnish Details.	Yes / No
	iii) Whether corrective action taken immediately and first-aid facilities provided in the site?	Yes / No
17	Were there any terminations of Contracts by the Employer? If yes, please furnish the details.	Yes / No. 1. Name of Project :  Reasons  2. Name of Project :  Reasons
18	Details of the Banker	
	Name of the Banker	
	Contact person	
	Office Address	
	Telephone Number	
	Fax Number	
19	Are you / Firm a Recipient of any Award in appreciation of your / Firm's work? If yes, please furnish the details	Yes / No

21	<p>Please give at least two references of Employers (Engineers, Architects or top Officials of Organization) for whom you may have executed Interior works of importance and similar nature from whom <i>the Employer</i> can verify</p> <p style="text-align: right;">1) Name : Designation : Company :</p> <p style="text-align: right;">2) Name : Designation : Company :</p> <p style="text-align: right;">3) Name : Designation : Company :</p>	
23	Any special information, which you may like to provide.	

Place :

***Authorized***  
**Signature of the TENDERER**

Date :

**Common seal of the Company**

**Format - B****KEY PERSONNEL TO BE DEPLOYED FOR THE PROJECT**

S.No.	Details required	To be filled by TENDERER
<b>A</b>	<b>Managerial Level - General</b>	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	
5	Professional experience in the similar nature of works.	
6	Years with the TENDERER	
7	Language known	
8	Name two recent works and nature of involvement of the person	
<b>B</b>	<b>Managerial Level - Technical</b>	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	
5	Professional experience in the similar nature of works.	
6	Years with the TENDERER	
7	Language known	
8	Name two recent works and nature of involvement of the person	
<b>C</b>	<b>Managerial Level - Administration &amp; Finance</b>	
1	Individual's Name	
2	Age	
3	Qualification	

4	Present position	
5	Professional experience in the similar nature of works.	
6	Years with the TENDERER	
7	Language known	
8	Name two recent works and nature of involvement of the person	
<b>D</b>	<b>Managerial Level - Quality Control and Quality Assurance</b>	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	
5	Professional experience in the similar nature of works.	
6	Years with the TENDERER	
7	Language known	
8	Name two recent works and nature of involvement of the person	
<b>E</b>	<b>Managerial Level - Safety Officer &amp; Industrial Relation Officer</b>	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	
5	Professional experience in the similar nature of works.	
6	Years with the TENDERER	
7	Language known	
8	Name two recent works and nature of involvement of the person	

9	Name two recent works and nature of involvement of the person	
<b>Note :</b>	<b>1) CV of each of the above key personnel and details of their experience should be included in the submission.</b>	
	<b>2) Organization Chart (both office and site) specific for this project for all the divisions of work (Main works &amp; Direct Sub works) as an Annexure to this format must be attached.</b>	

Place :

*Authorized*  
Signature of the TENDERER

Date :

Common seal of the Company

## Format - C

**FINANCIAL INFORMATION**

Sl.No	Description	Details to be filled in by TENDERER
<b>A</b>	<b>Annual Turnover in the last five financial years (In INR )</b>	
1	Year : 01st April 2012- 31st March 2013	
2	Year : 01st April 2013- 31st March 2014	
3	Year : 01st April 2014 - 31st March 2015	
4	Year : 01st April 2015 - 31st March 2016	
5	Year : 01st April 2016 - 31st March 2017	
<b>B</b>	<b>Financial Information (In INR)</b>	
1	Year : 01st April 2012 - 31st March 2013	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	
	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	
	h. Working Capital	
2	Year : 01st April 2013 - 31st March 2014	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	
	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	
	h. Working Capital	
3	Year : 01st April 2014 - 31st March 2015	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	

	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	
	h. Working Capital	
4	Year : 01st April 2015 - 31st March 2016	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	
	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	
	h. Working Capital	
5	Year : 01st April 2016 - 31st March 2017	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	
	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	
	h. Working Capital	
<b>D</b>	<b>Credit facilities available to TENDERER – Fund and non-fund based such as Cash Credit, Working capital term loans, LCs and Bank Guarantees - Banker's or Bankers' Letter must be produced - (In INR)</b>	
	a. Name of Banker with address	
	b. Date of Letter of Support	
	c. Amount	
<b>E</b>	<b>TENDERER's Financial resources for this project</b>	
	a. Own resources	
	b. Banker's or Bankers' credits	
<b>F</b>	a. Approximate total value of on-going works	



	b. Total Value of works to be completed as 30.04.2017  <b>Note:</b> 1) The TENDERER should furnish the value of work to be completed as of now along with break-up details of each work in the Proforma enclosed with this Format - C.  2) The TENDERER has to ensure that the list of works covered in this Proforma should be same as the ones listed in Format - E (List & details of Ongoing works) with Proforma of each work.	
<b>G</b>	<b>Anticipated total value of new works for the next financial year i.e.</b>	

Place :

Authorized  
Signature of the TENDERER

Date:

Common seal of the Company

**Format - D**

**Details of completed works in the Last Seven Years**  
***(To be furnished for each Project Separately)***

S.No.	Details required	To be filled by the TENDERER
1	Name of work	
2	Country and location	
3	Employer's name and address	Name: Address :
4	Consultants name and address.	Name : Address :
5	Total tendered cost of work Agreement No. Date	INR ..... Millions Agreement No: Date :
6	Total actual cost of work after completion.	INR ..... Millions
7	Date of commencement	
8	Period of completion	
9	Stipulated date of completion	
10	Actual date of completion	
11	Extended by the contractor, if any. Reason for non-completion of work in stipulated time limit / extended time limit, if so furnish details	Yes / No
12	Extension of time granted by the Employer, if any.  If yes, please specify the reason for extension of time.	Yes / No
13	Brief description of works including principal features and quantities of main items of the work.	
14	Name of Contractor's Engineer in-charge of the Project & Qualifications.	Name :Qualification :
15	Whether the Programming and planning plan was followed in the form of Pert Chart adopting softwares like Primavera / MS Project?	Yes / No

16	Whether the Quality Control and Quality Assurance function was carried out? If yes, Please give details and copies of quality formats used in anyone project	Yes / No
17	Whether the safety measures were followed? If yes, Please give details.	Yes / No
18	Attach Employer's certificate, as may be available (Not below the rank of Director or equivalent)	Yes / No

Place :

**Authorized**  
**Signature of the TENDERER**

Date :

**Common seal of the Company**

**Format - E**

**Details of On-Going works**  
*(To be furnished for each Project Separately)*

S.No.	Details required	To Be filled by the TENDERER
1	Name of work	
2	Country and location	
3	Employer's name and address	Name : Address :
4	Consultants name and address.	Name : Address :
5	Total tendered cost of work (Agreement No. and Date)	INR ..... Millions
6	(a) Brief description of works including principal features and quantities of main items of the work.	
7	i) Percentage of physical completion	
	ii) Amount billed for the work completed.	
	iii) Cost of work remaining to be executed as on the date of submission.	
	iv) Stipulated date of completion	
	v) Anticipated date of completion	
8	Name of Contractor's Engineer in-charge of the Project & Qualifications.	Name : Qualification :
9	Details of specialized works under this Contract	

10	Specialised works being executed by their own divisions	
11	Attach Employer's certificate, as may be available (Not below the rank of Director or equivalent)	Yes / No

Place :

**Authorized  
Signature of the TENDERER**

Date :

**Common seal of the Company**

**Format - F****PLANT, MACHINERY & EQUIPMENT**

S. No.	Name of Equip-ment*	Qty	Total requirement	Equipment in Hand	Equipment to be Procured
--------	---------------------	-----	-------------------	-------------------	--------------------------

			No. of units for the Work	Kind and Make	Capacity	No. of each	Year of Manufacture & Present Condition	Number	Capacity	Through Purchase / Lease **
1										
2										
3										
4										
5										
6										

\* Attach list of additional and essential equipment for the works for which qualification has been asked. This will include special requirements, if any, of executing Agency, as stipulated by them

\*\* If leased / hired, indicate the date , when the current / lease expires,

Place :

**Authorized**  
**Signature of the TENDERER**

Date :

**Common seal of the Company**

**Format - G**

**Details of Termination of contract by previous Employers in the past, if any**  
*(To be furnished for each Project separately, if more than one)*

S.No.	Particulars	To Be filled by the TENDERER
1	Name of works	
2	Name of the Employer	
3	Value of Contract in INR	
4	Period of Contract	
5	Terminated at what stage	
6	Reasons / grounds for termination	
7	Approx. value of work completed at the time of termination in INR	
8	Approx. value of balance work not completed in INR	
9	Remarks	

Place :

**Authorized**  
**Signature of the TENDERER**

Date :

Common seal of the Company

I. **Nature of Submissions :**

1. The submissions from the TENDERER in response to the above question under Clause-IV shall be in the form of a statement signed by the authorized signatory on behalf of the TENDERER, who shall hold the Power of Attorney to sign such documents. The Power of Attorney documents shall also be attached.
2. The statement submitted and signed by the Power of Attorney holder shall also be countersigned by the Company Secretary of the Company with official seal.

**Note :** 1) *The Employer* or his authorized representatives reserves the right to verify any part of the information furnished by the TENDERER in the above statements, without any prejudice to the terms and conditions of the Contract. The TENDERER is deemed to have given his consent, for the right of verification by the *Employer*, or his authorised representative, when the TENDERER submits the above statements.

- 2) If it comes to the notice of the *Employer*, that the TENDERER has suppressed any information, or furnished misleading, or inaccurate information, or in case whether any litigation currently in progress at the time of submission of TENDERS, lead to the decree by the Court of Law, against the TENDERER, *the Employer* reserves the right, to nullify the Qualification, and to disqualify the TENDERER. If such information becomes available to the *Employer*, prior to issue of Letter of Intent, the TENDERER will be disqualified, and will not be considered for award of work. If such information comes to the knowledge of the *Employer*, after the award of work, *the Employer* reserves the right, to terminate the Contract unilaterally, at the total cost and risk of the TENDERER and such action would include but not *limited* to forfeiture of all deposits, guarantees etc. furnished in any form. *The Employer* will also reserve the right, to recover any Retention Money, paid by invoking of Bank Guarantees submitted, including invoking of the Performance Bond.

The entire work executed upto the stage of such termination including materials procured and delivered at site, will be taken over by *the Employer*, and adjusted towards any payment due, as per Contract conditions. *The Employer* can thereafter arrange for a tendering process, for completion of the balance works, for which any additional financial burden to be met by *the Employer*, will also be recovered, from the Contractor, who has been terminated, without prejudice to the other rights, of *the Employer*, under the Contract

**Place :**

**Authorized  
Signature of the TENDERER**

**Date :**

**Common seal of the Company**





## **CHENNAI METRO RAIL LIMITED**

(A JOINT VENTURE OF GOVERNMENT OF INDIA AND GOVERNMENT OF TAMIL NADU)

### **TECHNO COMMERCIAL TENDER TWO COVER SYSTEM**

**INTERIOR WORKS SUCH AS WARDROBE AND KITCHEN FOR THE  
STAFF QUARTERS AT CMRL DEPOT, KOYAMBEDU, CHENNAI  
600107**

**COVER - A - TECHNICAL BID**

### **PART B – NOTICE INVITING TENDER AND GENERAL CONDITIONS OF CONTRACT**

**DATE OF SUBMISSION OF TENDER - 19-06-2017 UP TO 14.00 Hours**

**DATE OF OPENING OF TENDER - 19-06-2017 UP TO at 14.30 Hours**

#### **TO BE SUBMITTED TO:**

**The JOINT GENERAL MANAGER (DESIGN)  
Chennai Metro Rail Limited**  
Admin. Building, CMRL Depot  
Poonnamallee High Road ,  
Koyambedu, Chennai - 600107

#### **TENDER SUBMITTED BY:**

**M/s.**\_\_\_\_\_

**Address**\_\_\_\_\_

\_\_\_\_\_

**NOTICE INVITING TENDER****1.0 CONTRACT DATA**

<b>Period of Sale of Tender Document</b>	18.05.2017 to 16.06.2017 (During 10.00 hours to 17.30 hours)
<b>Date of submission of tenders</b>	19.06. 2017
<b>Validity of tender</b>	40 days from last date of submission of tender
<b>Time and Date of Pre-bid meeting</b>	02.06.2017 Hrs in the CMRL's conference room.
<b>Duration of Contract ( Completion period of the work)</b>	60 (Sixty) days
<b>Issue of Pre tender Clarifications</b>	08.06.2017
<b>Earnest Money Deposit</b>	<b>Rs 2,50,000/- (Rupees Two lakhs fifty Eight thousand only)</b> by Demand Draft, drawn from any Nationalized or Scheduled Bank in India payable at Chennai, in favour of <b>Chennai Metro Rail Ltd, Chennai-107</b> , Tamil Nadu, India (OR) by Bank Guarantee on any Nationalized or Scheduled Bankers in India, valid up to 60 days from the date of submission of Tender.
<b>Tender Documents to be submitted to and Place of Opening of Tender Plae</b>	<b>The Joint General Manger ( Design)</b> Chennai Metro Rail Limited Admin. Building, CMRL Depot Poonnamallee High Road , Koyambedu, Chennai - 600107
<b>Period of completion of work</b>	60 days
<b>Bidders barred from bidding for this work</b>	The bidder or JV partner have not abandoned any contract executed for Government Metro Rail Corporation and none of the contracts executed by the bidder or JV partner have been terminated by the Government Metro Rail corporation prior to this bid submission.
<b>Website from which Tender Documents and any additional information can be downloaded</b>	www.chennaietrail.org
<b>TENDER SUBMITTED BY</b>	

**2.0 TENDER FORM**

To

**The Joint General Manager (Design)****Chennai Metro Rail Limited**

Admin. Building, CMRL Depot

Poonamallee High Road ,

Koyambedu, Chennai - 600107

Dear Sir,

1. Having examined the drawings, specification, designs and Bill of Quantities, relating to the works specified in the memorandum hereinafter set out, and having visited and examined the site of the works specified in the said tender, and having acquired the requisite information relating thereto as affecting the Tender, I / we, hereby offer to execute the works specified in the said tender within the time specified in the said memorandum at the rates mentioned in the attached Bill of Quantities and in accordance in all respects with the specification, designs, drawings, and instructions in writing referred to in the Conditions of Tender, the Articles of Agreement, Special Conditions, Bill of Quantities, and Conditions of Contract, and with such materials as are provided for by and in all other respects in accordance with such conditions so far as they may be applicable.

**MEMORANDUM**

a. Description of works	Interior works such as wardrobe and kitchen for the staff quarters at CMRL depot, Koyambedu, Chennai 600107
b. Earnest Money Deposit	<b>Rs 2,50,000/- (Rupees Two lakhs fifty Eight thousand only)</b> by Demand Draft, drawn from any Nationalized or Scheduled Bank in India payable at Chennai, in favour of <b>Chennai Metro Rail Ltd, Chennai-107</b> , Tamil Nadu, India (OR) by Bank Guarantee on any Nationalized or Scheduled Bankers in India, valid up to 60 days from the date of submission of Tender..
c. Percentage to be deducted from bills towards retention money	10% of the value of the work done will be deducted by the Employer from each payment to be made to the Contractor until the retention money amounts to a maximum of 5% of the contract sum of the work.  Upon the Engineer's certificate of completion of the works, 50% of the retention money would be refunded and the balance after due completion of all obligations under the contract agreement (28 days later) and defects liability period. The amounts retained by the Employer shall not bear interest.
d. Date of Commencement	7 days from the date of issue of Letter of Award

e. Time allowed from the date commencement for completion of the work	60 (Sixty) days

2. Should this Tender be accepted, I / we hereby agree to abide by and fulfill the terms and provisions of the said Conditions of Contract annexed hereto or in default thereof to forfeit and pay to Chennai Metro Rail Limited, Chennai-600 107 the amount mentioned in the said Contract.
3. We agree to execute the proposed project works with complete cooperation and coordination with the independent other contractors, if any, to achieve sequential, unhindered and harmonious progress with the objective of completion of the Entire Project within the stipulated time for the entire project works for the Employer's beneficial use of the Project.
4. I / We have enclosed herewith the Earnest Money Deposit for **INR 2,50,000/- (Rupees Two lakhs fifty thousand only)** in the form of Demand draft which amount is not to bear any interest. Should I / we, fail to execute the contract when called upon to do so I / we do hereby agree that this sum shall be forfeited by me / us, to the Chennai Metro Rail Limited, Chennai - 600 107.
5. If this Tender is accepted we agree to provide a Bank Guarantee from a Nationalized / Scheduled Bank in India as Performance Bond for a sum equivalent to **Five percent** of the Contract value for the due performance of the Contract under the terms of the conditions of Contract within time.
6. We agree to abide by this Tender for the period of **40days (Forty days)** from the date of submission of tender and it shall remain binding upon us and may be accepted at any time before the expiration of that period, without any additional cost.
7. Unless and until, a formal agreement is prepared and executed this Tender together with your written acceptance thereof shall constitute a binding contract between us.
8. The lists showing the particulars of large works carried out and the names of manufacturers of specialized items as required, are enclosed.
9. Our bankers are : (Please state name, address, and phone No.)

i).....

ii).....

The names of Partners of our Firm / Directors, of our company are :  
(Please state name, address, and Phone No.)

i) .....

ii) .....

The name of the Partner, of the Firm / Director of our company, authorised to sign :

Yours faithfully,

Authorized Signature of Tenderer

(Should be signed by the authorised signatory. Board Resolution in the case of Company or a letter signed by all partners in the case of Firm to be enclosed.)

WITNESSES :

i) Signature:

Occupation:

Address:

ii) Signature:

Occupation:

Address:

### 3.0 INTRODUCTION

- 3.1. **Brief Description of Project:** The works consists of interior works such as wardrobes and kitchen for the Staff Quarters at CMRL Depot, Koyambedu, Chennai 600107 (Total 112 Residential units).
- 3.2. Time is the essence of project and the entire scope of work is to be completed within 60 (Sixty) days with responsibility to co-operate and coordinate with Employer / Employer's Representative if any to execute certain special nature of works and undertake responsibility to complete all the works concurrently within the time frame of the Project Completion Period and ensure sequential, unhindered and harmonious progress of work.

### 4.0 INSTRUCTIONS TO TENDERERS

- 4.1. Before submission, the Tenderer shall visit the site and familiarize himself with the site conditions including access to site, condition of existing structures, space for stacking of material and auxiliary construction activity, availability of required construction materials locally etc. and also carefully examine the conditions of contract, technical specifications (including drawing and other specifications referred to therein), the schedules and the bill of quantities and if there should be or appear to be any ambiguity in or discrepancy between any of these documents or between figured and measured dimensions upon the drawings, he should immediately refer the matter for clarifications.
- 4.2. The Tenderer shall investigate the following items during the site inspection referred above and to provide in his Tender rates for assuming full responsibility for services and amenities therefor, which will not be payable separately by the Employer.
  - Availability of power for construction
  - Availability of water for construction.
  - Means of disposal of storm water from the site.
  - Means of disposal of water due to de-watering at the site
  - Suitability of soil stratum at foundation base.
  - A copy of Soil Investigation Report on the investigation done on the site by the Employer is furnished under Appendix 6 for information.
- 4.3. The Employer discourages stipulation of additional conditions by the Tenders, as they are expected to accept the various provisions and conditions in the Tender documents. No conditional offer will be accepted.
- 4.4. Timely completion of the works is the essence of this contract and the period specified for the completion of the works from the date of Letter of Acceptance must be adhered to as indicated. Any deviation proposed shall be clearly mentioned. Commitment on early completion of work will be given due weightage while deciding on the tender.
- 4.5. The Tenderer shall complete the required documentation and fill in the rates and amounts in the bill of quantities. He shall sign and date the Tender documents in the spaces provided for the purpose. The Tenderer shall initial each page of the Tender Documents.
- 4.6. The tender shall be signed by person or persons duly authorised by the Tenderer with signature duly witnessed. In the case of proprietary firm the Tender shall be signed by the proprietor. In case of a partnership firm the Tender shall be signed by partner duly authorised under partnership deed. In the case of a limited company the Tender shall be

- signed by a person holding Power of Attorney. In the case of consortium authorised signatory of each member of consortium.
- 4.7. The Tender shall contain an address for serving notices required to be served to the Tenderer in connection with the Tender.
- 4.8. The Tender form and the documents attached to it shall not be detached one from the other, and no alteration or mutilation (other than filling in all the blank spaces) shall be made in any of the documents attached hereto. Any modification proposed to the entries in the attached documents shall be pointed out in the covering letter; otherwise it shall not be entertained.
- 4.9. The rates quoted by the Tenderer shall not be subject to any adjustment with variations in wage rates, taxes, levies, prices of material or any other costs except where specific provisions have been made in this document.
- 4.10. The Tender shall be accompanied by the following information, schedules and drawings:
- 4.10.i. Construction programme showing the Tenderer's proposed sequence of operations together with the estimated time for each activity, including preparation of Shop drawings and designs for approval of the Employer / the Engineer / Employer's personnel manufacture, delivery, erection, commissioning and total completion of the work, etc. The tenderer shall submit a bar chart for fabrication and construction activities for the building.
  - 4.10.ii. The tenderer's proposals for supervising the work, including the numbers and experience of the various grades of supervisory personnel/officers for each month of the construction period and name of the person proposed to act as site in charge with brief details of his qualification and experience.
  - 4.10.iii. Schedule of labour requirements showing the total estimated labour force, for each month of construction period.
  - 4.10.iv. Schedule of proposed subcontractors / associates.
  - 4.10.v. Schedule of monthly electric power consumption including peak power requirement where applicable.
  - 4.10.vi. List of machinery & equipment to be deployed for the project.
  - 4.10.vii. The Tenderer should carefully go through the safety & quality norms required for the project. The Tenderer has to strictly adhere to the quality & safety requirements stated there in the Conditions of contract.
  - 4.10.viii. The Employer reserves the right to adjust arithmetical or other errors in the tender in accordance with the following general rules. In the event of discrepancy between words and figures quoted, the description in words shall prevail. Similarly in the event of an error in the amount column arising as a result of wrong extension, the unit or item rates shall be regarded as firm and extensions amended accordingly.
  - 4.10.ix. **Collection of Information for Tender:** The Tenderer must obtain for himself on his own responsibility and at his own expense all the information which may be necessary for the purpose of making a Tender and for entering into a contract and must examine the Drawings and must inspect the site of the work and acquaint himself with all local and site conditions, means of access to the work, nature of the work, nature of soil conditions, availability of any infrastructure and all matters appertaining thereto. Ignorance of the site conditions shall not be accepted by the Employer as a basis for any claim for compensation.
  - 4.10.x. **The EMD will be forfeited if the tenderer withdraws / modifies their offer / refuse to accept the LOA.**

## **GENERAL CONDITIONS OF THE CONTRACT**

### **5.0 DEFINITIONS AND INTERPRETATIONS**

In the Contract, as hereinafter defined the following words and expressions shall have the meanings hereby assigned to them, except where the context requires otherwise.

- 5.1. "Employer" means the Board of the Chennai Metro Rail Limited (CMRL), Chennai, a body corporate established by Companies Act 1956, acting through its Managing Director or any other officer so nominated by the Managing Director and shall include their legal successors and permitted assignees.
- 5.2. "Engineer / Employer's Representative" means such persons, or firm, as may be appointed from time to time by the Employer, and notified in writing to the Contractor to act as Engineer for the purposes of the Contract, or any nominated officer of CMRL.
- 5.3. "Engineer's Representative" means any Assistant of the Engineer, or any clerk of works, appointed from time to time by the Engineer under Sub-clause 5.2.
- 5.4. "Contractor" means the individual, firm, company, corporation, Joint Venture, or consortium whether incorporated or not, who enters into the Contract with the Employer and shall include his heirs, his executors, administrators, successors, legal representatives, as the case may be. "Contractor's Agent" shall mean the person or persons authorised under power of attorney duly empowered to take all actions relating to the work, as could be taken by the Contractor himself.
- 5.5. "Contractor's Representative" shall mean a person in supervisory capacity who shall be so declared by the Contractor and who shall be authorised under a duly executed power of attorney to comply the instructions and to receive materials issued by the Engineer to the Contractor for works. He shall be capable of taking responsibility for proper execution of works.
- 5.6. "Sub-Contractor" means the individual, Firm Company, Corporation, Joint Venture or Consortium, having direct contract with the Contractor and to whom any part of the Work has been sublet by the Contractor, with prior permission of the Engineer or Employer and shall include his heirs, his executors, administrators, successors, legal representatives, as the case may be.
- 5.7. "Other Contractor" or "Others" means the individual, firm, Company, Corporation, Joint Venture or Consortium, employed by or having a contract directly or indirectly with the Employer otherwise than through the Contractor.
- 5.8. "Tenderer or Bidder" means the individual, firm, Company, Corporation, Joint Venture or Consortium submitting a bid / tender.
- 5.9. "Scheduled Bank" means a bank included in the second schedule to the Reserve Bank of India Act, 1934, or modifications thereto.



- 5.10. "Contract" means the Contract Agreement with all documents mentioned in "Instruction to Tenderers".
- 5.11. "Tender or Bid" means the offer made by individual, Firm, Company, Corporation, for the execution of the works.
- 5.12. "Specification" means the specification referred to in the Contract and any modification thereof or addition thereto, as may from time to time be furnished or approved in writing by the Engineer.
- 5.13. "Drawings" means maps, drawings, plans, tracings or prints thereof, calculations and technical information of a like nature provided by the Engineer to the Contractor or annexed to the Contract, and any modifications of such drawings and further drawings that may be issued by the Engineer from time to time or approved by the Engineer in writing. It includes such other drawings as are made from time to time and furnished by the Contractor and approved by the Engineer.
- 5.14. "Bill of Quantities" means the priced and completed Bill of Quantities forming part of the Tender.
- 5.15. "Contract Price" or "Contract Value" means the sum stated in the Letter of Acceptance, subject to such additions thereto or deductions therefrom as may be made under the provisions of the Contract.
- 5.16. "Works" means the work to be executed in accordance with the Contract and shall include both Permanent Works and Temporary Works.
- 5.17. "Permanent Works" means the permanent works to be executed, completed and maintained in accordance with the Contract.
- 5.18. "Temporary Works" means all temporary and enabling works of every kind required for the execution and completion of the permanent works and the remedying of any defects therein.
- 5.19. "Construction Plant" means all machinery, appliances or things of whatsoever nature, required for the execution, completion or maintenance of the works, but does not include material or other things, intended to form or forming part of the permanent works.
- 5.20. "Site" means the land and / or other places on, under, in or through which the Works are to be carried out, and any other lands or places provided by the Employer for the purpose of the Contract.
- 5.21. "Materials" means all equipment, components, fittings and other materials including raw materials required to execute and complete the work.
- 5.22. "Test" means such tests as are prescribed in the specifications or by the Engineer or Engineer's Representative, whether performed by the Contractor or by the Engineer or his Representative or any agency acting under the direction of the Engineer.
- 5.23. "Approval or Approved" means approval in writing including subsequent written confirmation of previous verbal approval.

- 5.24. "Period of Maintenance" means the specified period of maintenance from the date of completion of the work as certified by the Engineer and specified in the Contract. This period is also termed as "Defects Liability Period".
- 5.25. "Letter of Acceptance" means the letter from the Employer or the Engineer, or a person nominated by them on their behalf for this purpose, to the Contractor, conveying acceptance of the Tender, subject to any modifications agreed to between the parties and includes advance acceptance of the tender.
- 5.26. "Month" means calendar month.
- 5.27. "Day" means calendar day.
- 5.28. "Terms and expressions not herein defined" shall have the meanings assigned to them in the "Indian General Clauses Act, 1897" or the Indian Contract Act or the Indian Sale of Goods Act or any other applicable Indian Law, as the case may be.

## 6.0 HEADINGS AND

- 6.1. **Headings and Marginal Notes:** The top headings and marginal notes given in the Tender or Contract documents are solely for the purpose of facilitating reference and shall not be deemed to be part thereof and shall not be taken into consideration in the interpretation or construction thereof or of the Contract.
- 6.2. **Interpretation:** Words importing persons or parties shall include firms, corporations and any organization having legal entity.

## 7.0 SINGULAR, PLURAL AND GENDER

- 7.1. Words importing the singular only also include the plural and vice versa where the context requires. Similarly words importing masculine gender also include the feminine gender.

## 8.0 ENGINEER AND ENGINEER'S REPRESENTATIVE

- 8.1. **Duties and Authority of Engineer:** The Engineer shall carry out the duties specified or implied in the Contract including issue of instructions, decisions, certificates and orders, as are specified in the Contract, or necessary for the observance / administration of the Contract and expeditious and timely completion of the Work. Should the Engineer exercise any specific authority for which, as per the terms of his appointment, he has to obtain the approval of the Employer, the Contractor shall deem such approval to have been given by the Employer.
- 8.2. **Duties and Authority of Engineer's Representative:** The Engineer's Representative shall be responsible to the Engineer. His duties are to watch and supervise the Works and to test and examine any materials to be used or workmanship employed in connection with the Works. He shall have no authority to relieve the Contractor of any of his duties or obligations under the Contract, nor, except as expressly provided hereunder or elsewhere in the Contract, to order any Work involving extra time or any extra payment by the Employer, nor to make any variation of or in the Works.

- 8.3. The Engineer may, from time to time, in writing delegate to the Engineer's Representative, any of the powers and authorities vested in the Engineer, and shall furnish to the Contractor and to the Employer, a copy of all such written delegations of powers and authorities. Only written instruction, decision or approval given by the Engineer's Representative to the Contractor within the terms of such delegation, but not otherwise, shall bind the Contractor and the Employer, as though it had been given by the Engineer. Provided always as follows:
- 8.4. Failure of the Engineer's Representative or his assistants, to reject any work or materials shall not prejudice the authority of the Engineer or Employer thereafter, to reject such work or materials or plant and order the pulling down, removal or breaking up thereof. The Engineer's Representative shall have similar authority to reject any work or material or plant passed by his Assistants, appointed in terms of provision of herein.
- 8.5. If the Contractor shall be dissatisfied by reason of any instruction or decision of the Engineer's Representative, he shall be entitled to refer the matter to the Engineer, who shall thereupon confirm, reverse or vary such decision. The Engineer's Representative shall have similar authority to confirm, vary, or, reverse any instructions and decisions issued by his Assistants, appointed in terms of herein.
- 8.6. **Assistants to Engineer and Engineer's Representative:** The Engineer or the Engineer's Representative may appoint any number of assistants to assist them. Their names, duties and scope of authority shall be notified to the Contractor, and they shall have the authority to issue instructions / give decisions to the extent of duties assigned and powers delegated to them.
- 8.7. **Instructions in writing:** Instructions given by the Engineer shall be in writing, provided that if for any reason the Engineer considers it necessary to give any such instruction orally, the Contractor shall comply with such instructions. Confirmation in writing of such oral instruction given by the Engineer, whether before or during or after carrying out of the instruction, shall be deemed to be an instruction within the meaning of this Sub-clause.

## 9.0 CONTRACT SUM, ASSIGNMENT AND SUBCONTRACTING

### 9.1. Item Rate Contract

- 9.1.i. The Contract shall be an item rate contract. The Contractor shall be paid for the actual quantity of work permanently installed and in accordance with the contract documents, at the rates quoted by him in the Contract Bills. Measurement shall be carried out as indicated in the tender specification and as per schedule of quantities and prices.
- 9.1.ii. The schedule of Quantities given in Contract Bill is provisional and is meant to indicate the scope of the work and to provide a uniform basis for Tendering. The Owner reserves the right to increase or decrease any of the quantities or to totally omit any item of work and the Contractor shall not claim any extras or damages on these grounds.
- 9.1.iii. Quantity variation will have no ceiling limit in respect of individual items and individual quantities can vary to any extent except skewed items. Such

variations shall not warrant any claims for modifications to already quoted and accepted rates. However variation to the value of total contract sum can vary to the extent up to Plus (+) or minus (-) 30% without warranting change of rates. In case the total value of contract varies in excess of the above limit, rates of only the variation items and extra items will be re-considered based on actual impact.

- 9.1.iv. Tax - The rates shall also be firm and shall not be subject to variations in costs of any or all inputs, such as but not limited to, materials, labour, exchange variations, labour conditions, fluctuations in railway freights, or any conditions whatsoever. Tenderers must include in their rates / various tax / Duty / Freight charges, excise duty, entry, octroi or other tax, duty or, and any other tax and duty or other levy levied by the Central Government or any State Government or local authority except Service tax and cess, as applicable including any variation during the Contract period and any agreed extension thereto. No claim in respect of any variation or introduction taxes or duties or levies as existing or future, shall be entertained by the Employer.

**9.2. The Contract Sum**

- 9.2.i. The Contract Sum shall be agreed or determined and be subject to adjustments in accordance with the Contract;
- 9.2.ii. The Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Sum shall not be adjusted for any of these costs
- 9.2.iii. Any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities of the Works which the Contractor is required to execute.

- 9.3. **Assignment of Contract:** The Contractor shall not, without the prior consent of the Employer (which consent shall be at the sole discretion of the Employer), assign the Contract or any part thereof, or any benefit or interest therein or thereunder, otherwise than by:

- 9.3.i. A charge in favour of the Contractor's bankers of any money due or to become due under the Contract, or
- 9.3.ii. Assignment to the Contractor's insurers (in cases where the insurers have discharged the Contractor's loss or liability) of the Contractor's right to obtain relief against any other party liable.

- 9.4. **Subcontracting:** The Contractor shall not subcontract the whole of the Works. Except where otherwise provided by the Contract who has approved by the Employer, the Contractor shall not subcontract any part of the Works without the prior consent of the Engineer. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and defects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or defects of the Contractor, his agents, servants or workmen.

- 9.4.i. Provided that the Contractor shall not be required to obtain such consent for:

9.4.i.1. The provision of labour, or

9.4.i.2. The purchase of materials which are in accordance with the standards specified in the Contract, or the subcontracting of any part of the Works for which the Subcontractor is named in the Contract.

## 10.0 COMMUNICATIONS AND LANGUAGE OF CONTRACT

10.1. **Communications to be in writing:** All notices, communications, references and complaints by either party to the Contract shall be in writing and no notice, communication, reference or complaint not in writing, shall be recognized or be binding.

10.2. **Language of Contract:** The Contract document shall be drawn up in English. Supporting documents or literature may be in any other language, but an appropriate English translation duly authenticated thereof shall be provided. In case of inconsistency between the two, the English translation shall prevail.

## 11.0 LAWS GOVERNING THE CONTRACT AND CO-RELATION OF DOCUMENTS

11.1. **Laws governing the Contract:** The Contract shall be governed by the laws for the time being in force in India.

11.2. **Co-relation of documents:** The contract documents are complementary and what is called for by any one of them shall be as binding as if called for by all of them.

11.3. **Ambiguities or discrepancies:** The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- i. The letter of Acceptance.
- ii. Articles of Agreement
- iii. Pre Bid Queries
- iv. Preamble & Bill of Quantities
- v. Technical Specification
- vi. Conditions of Contract
- vii. Tender Drawings
- viii. IS Code
- ix. Other Codes

11.4. If an ambiguity or discrepancy is found in the documents or conflicts between description in 2 documents, then the following priority shall govern:

- i. Contract Agreement
- ii. Letter of Acceptance
- iii. Preamble & Bill of Quantities

- iv. Technical Specifications
- v. Conditions of Contract
- vi. Tender Drawings
- vii. IS Code
- viii. Other codes

## 12.0 SPECIFICATIONS AND DRAWINGS

- 12.1. **Ownership:** The Contractor shall keep at site in good order one copy of latest approved Specifications and Drawings and also such other contract documents as may be necessary and make them available to the Engineer or his Representative. All specifications and drawings shall remain the property of the Employer and shall not be used on other works and shall be returned by the Contractor to the Employer on completion of the works or on termination of the Contract.
- 12.2. **Adherence to Specifications and Drawings:** The works shall be executed in perfect conformity with the specifications and drawings of the Contract issued to the Contractor by the Engineer from time to time. If the Contractor does any work or part of work in a manner contrary to the specifications or drawings without the approval of the Engineer, he shall bear all the costs arising there from including dismantling and reconstruction strictly in accordance with the specifications and drawings and shall be responsible for all loss to the Employer. The Engineer shall have full power and authority to supply to the Contractor from time to time such further drawings as may be needed for the proper and adequate execution and maintenance of the work. The term "Drawings" in this Sub-clause includes the drawings prepared by the Contractor and approved by the Engineer, as specified in the Contract.
- 12.3. **Meaning and Intent of Specifications and Drawings:** If any ambiguity arises as to the meaning and intent of any portion of the specifications and drawings or as to execution or quality of any work or material or as to the measurement of the Works, the decision of the Engineer there shall be final and binding.
- 12.4. **Compliance with Contractor's Request for Details:** The Contractor shall give notice in writing to the Engineer whenever progress of the Works is likely to be delayed or disrupted

## 13.0 COMPLIANCE WITH REGULATIONS AND BYLAWS

- 13.1. The Contractor shall comply with the provisions of any statute relating to the works, regulations and bylaws of any local authority and undertaking, including those controlling the utilities such as water supply, sewerage, telephones, power supply, etc., in whose area / jurisdiction the work is to be executed. The Contractor shall be bound to give all notices required by statute, regulations or by-laws, as aforesaid and to pay all fees and invoices payable to any authority or undertaking in respect thereof.

- 13.2. It will be the responsibility of the Contractor to arrange for necessary clearances and approvals from such authorities and undertakings before the work is taken up.

#### **14.0 OCCUPATION AND USE OF LAND**

- 14.1. No land belonging to or in the possession of the Employer shall be occupied by the Contractor without the permission of the Engineer or the Employer. The Contractor shall not use, or allow the site to be used for any purpose other than that of executing the Works

#### **15.0 REPRESENTATION ON WORKS**

- 15.1. The Contractor, shall, when he is not in a position to be present at the site of work place keep responsible agent(s) there, during all working hours, who shall, on receiving reasonable notice, present himself / themselves to the Engineer, Engineer's Representative or their Assistants. The instructions and orders given by them to the Contractor's Agent (s) shall be deemed to have the same force, as if they had been given to the Contractor. Before absenting himself, the Contractor should furnish the name and address of his agent (s), for the purpose of this clause. Failure on part of the Contractor to comply with these provisions shall constitute a breach of Contract leading to action.

#### **16.0 RELICS AND TREASURES**

- 16.1. All gold, silver, coins, oil and other minerals of any description, and all precious stones of all kinds, treasures, antiques, fossils and other similar things, which shall be found in or at site, shall be the property of the Employer, and the Contractor shall duly preserve the same to the satisfaction of the Employer, and shall from time to time deliver the same to such person or persons, as the Employer may appoint to receive the same.

#### **17.0 INDEMNITY BY CONTRACTOR**

- 17.1. **Indemnity against All Actions of Contractor:** The Contractor shall hold and save harmless and indemnify the Employer, from and against all actions, suits, proceedings, loss, costs, damages, charges, claims and demands of every nature and description brought or recovered against the Employer, by reason of any act or omissions of the Contractor, his agent or his employees, in the execution of the Works or in the guarding of the same. All sums payable by way of compensation under any of these conditions, shall be considered as reasonable compensation payable to the Employer, without reference to the actual loss or damage sustained, and whether or not any damage shall have been sustained.
- 17.2. **Indemnity against All Claims of Patent Rights and Royalties:** The Contractor shall hold and save harmless and indemnify the Employer, his officers, agents, servants and employees from and against all claims and proceedings, for or on account of infringement by the Contractor of copyright, any patent rights, design trademark or name, secret process, patented or unpatented invention, articles or appliances manufactured or used for or in connection with the Works and from and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. Except where otherwise stated, the Contractor shall pay all royalties, rent and

other payments or compensation, if any, for getting stone, sand, gravel, clay or other materials required for the Works.

**17.3. Contractor's Warranty:**

The Contractor warrants to the Employer that:

- 17.3.i. the Works will, when completed, comply in all respects with the Employer's Requirements, and the intended use of the Works;
- 17.3.ii. the Works will, when completed, comply with enactments and regulations relevant to the Works;
- 17.3.iii. materials generally known to be deleterious or not in accordance with good engineering practice have been neither selected nor incorporated in the Works, by the Contractor.
- 17.3.iv. the transfer to the Employer of any warranty received from a sub-contractor/vendor for the Works shall be effected to the Employer at the time of Issue of the Performance Certificate.

**18.0 PERFORMANCE GUARANTEE**

- 18.1. **Amount of Performance Guarantee:** Within 10 days of receipt of the Letter of Acceptance from the Employer, the successful tenderer shall furnish to the Employer a security in the form of a bank guarantee for an amount of ten per cent of the Contract value. The approved form provided in the "Instructions to Tenderers" documents shall be used for Bank Guarantee. The Performance Guarantee shall be valid 28 days after the defects Liability period
- 18.2. Failure of the successful tenderer to furnish the required Performance Guarantee shall be a ground for the annulment of the award of Contract and forfeiture of the tender security.
- 18.3. **Release of Performance Guarantee:** The whole of the Performance Guarantee amount, shall be liable to be forfeited to the Employer at the discretion of the Employer, in the event of any breach of contract on the part of the Contractor or if the Contractor fails to perform or observe any of the conditions of Contract. On due and faithful completion of the entire work, one half of the Performance Guarantee amount shall be refunded to the Contractor, subject to the issue of Completion Certificate by the Engineer, in accordance with conditions for issue of completion certificate of these conditions. This shall not relieve the Contractor from his obligations and liabilities, to make good any failures, defects, imperfections, shrinkages or faults that may be detected during the period of maintenance specified in the Special Conditions of Contract. The balance of the Performance Guarantee amount, shall become due and shall be paid to the Contractor, after the expiry of the period of maintenance specified in the Contract, reckoned from the date on which the Engineer shall have issued the Certificate of Completion comprising the whole of the Works, and after all failures, defects, imperfections, shrinkages and faults have been rectified by the Contractor, to the satisfaction of the Engineer. Where different maintenance periods are applicable to different parts of the Works, the expression, "expiration of the period of maintenance", shall for the purpose of this clause, be deemed to mean the expiry of last of such periods.



- 18.4. Provided always that, no Performance Guarantee amount shall become due nor payable to the Contractor, unless all the stipulations of the Contract have been fulfilled by the Contractor and all claims and demands made by the Employer for and in respect of damage or loss by, from or in consequence of the Works, but excluding the claims made by the Contractor on the Employer, have been finally satisfied.

## **19.0 INSPECTION OF SITE**

- 19.1. The Employer shall have made available to the Contractor with the Tender documents such data on hydrological and sub-surface conditions as may have been obtained by or on behalf of the Employer from investigations undertaken relevant to the Works and the Tender shall be deemed to have been based on such data, but the Contractor shall be responsible for interpretation thereof.
- 19.2. The Contractor shall also be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself, so far as is practicable, before submitting his Tender, as to the form and nature thereof, including the sub-surface conditions, the hydrological and climatic conditions, the extent and nature of work and materials necessary for the completion of the Works, the means of access to the Site and the accommodation he may require and, in general, shall be deemed to have obtained all necessary information, subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his Tender or execution of work.

## **20.0 CONTRACTOR'S UNDERSTANDING**

- 20.1. The Contractor shall be deemed to have satisfied himself, before tendering, as to the correctness and sufficiency of his Tender for the Works and of the rates and prices stated in the priced Bill of Quantities and the Schedule of Rates and Prices, if any, all of which shall, except insofar as it is otherwise provided in the Contract, cover all his obligations under the Contract and all matters and things necessary for the proper execution and maintenance of the Works. If, however, during the execution of the Works, the Contractor shall encounter physical conditions, other than climatic conditions on the site, or conditions or obstructions could, in his opinion, not have been reasonably foreseen by an experienced Contractor, the Contractor shall forthwith give written notice thereof to the Engineer's Representative and if, in the opinion of the Engineer, such conditions could not have been reasonably foreseen by an experienced Contractor, then the Engineer shall certify and the Employer shall pay reasonable additional cost to which the Contractor could have incurred by reason of such conditions in the following cases :
- 20.1.i. for complying with any instruction which the Engineer may issue to the Contractor in connection therewith, and
- 20.1.ii. for any proper and reasonable measures approved by the Engineer which the Contractor may take in the absence of specific instructions from the Engineer, as a result of such conditions or obstructions being encountered.
- 20.2. The decision of the Employer as to the additional cost shall be final and binding.

## **21.0 GENERAL RESPONSIBILITY OF THE CONTRACTOR**

The Contractor shall comply with the provisions of the contract and with due care and diligence execute and maintain the works and provide all labour there for, and be responsible for supervision of all works, structural Plans and other things whether of temporary or permanent nature required for such execution and maintenance in so far as necessary for providing these, as is specified or as could be reasonably inferred from the Contract. The Contractor shall take full responsibility for the adequacy, stability and safety at site of all works, materials and methods of construction, provided, however, that the Contractor shall not be responsible except as may be expressly provided for in the tender or the General or Special Conditions of Contract for the design or specifications of permanent works or of any temporary works prepared and approved by the Engineer.

## **22.0 PROVISION OF EFFICIENT AND COMPETENT STAFF**

The Contractor shall employ and keep on the works at all times efficient and competent staff to give necessary directives to his workers to see that they execute works in a safe and proper manner. The Contractor shall employ only such supervisors and workmen as are capable, careful, skilled in their trade and calling. The Engineer shall be at liberty to object to and require the Contractor to remove forthwith from the works, any person employed by the Contractor in or for the execution of works or maintenance of works, who, in the opinion of the Engineer, misconducts himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by the Engineer to be undesirable and such person shall not be employed again in the works without the written permission of the Engineer. Any person so removed from the works shall be replaced by a competent substitute immediately.

## **23.0 WORKS DURING NIGHT**

- 23.1. Works are generally carried out in day hours. The Contractor shall not carry out any work in night subject to restriction imposed by local authorities /police. If Situation warrants to undertake the works at night hours , the contractor has to apply in writing to Employer / Employer's representative for permitting them to work for the specific period and upon approval by Employer / Employer's representative the work can be executed at night Hours.

## **24.0 DAMAGE TO EMPLOYER'S PROPERTY, PRIVATE PROPERTY AND LIFE**

- 24.1. The Contractor shall be responsible for all risks to the works and for trespass and shall make good, at his own expense, all loss or damage to the works themselves or to any other property of the Employer or the lives, persons and property of others from whatsoever cause in connection with works until they are taken over by the Employer; in case the Employer is called upon to make good any such costs, loss or damages, or to pay compensation (including that payable under the provisions of Workmen's Compensation Act or any statutory amendments thereof) to any person or persons sustaining damage as aforesaid by reason of any act, omission or negligence on the part of the Contractor the amount of any costs or charges (including costs and charges in connection with legal proceedings), which the Employer may incur in reference thereto, shall be charged to the Contractor. The Employer shall have the authority to pay or to defend or compromise any claim or threatened legal proceeding or in anticipation of legal proceedings being instituted consequent on the action or default of the Contractor, to take such steps as may be considered necessary or desirable to ward

off or mitigate the effect of such proceedings, as aforesaid. Any sum or sums of money which may be paid and any expenses whether for reinstatement or otherwise which may be incurred and the propriety of any such payment, defence or compromise, and the incurring of any such expenses shall not be called in question by the Contractor.

## 25.0 INSURANCE

25.1. **Requirements:** Before commencing execution of Works, unless stated otherwise in the Special Conditions of Contract, it shall be obligatory for the Contractor to obtain at his own cost stipulated insurance cover under the following requirements:

25.1.i. Contractor's All Risk and Third Party Cover.

25.1.ii. Liability under the Workmen's compensation Act, 1923, Minimum Wages Act, 1948 and Contract Labour (Regulation and Abolition) Act, 1970.

25.1.iii. Accidents to staff, Engineers, Supervisors and others who are not governed by Workmen's Compensation) Act.

25.1.iv. Damage to material, machinery and works due to fire, theft etc.

25.1.v. Any other risk to be covered by Insurance as may be specified by the Employer in the Special Conditions of Contract.

### 25.2. Policy in joint names of Contractor and Employer

25.3. The policy referred to under Contractor's All Risk and Third Party Cover above shall be obtained in the joint names of the Contractor and the Employer and shall inter-alia provide coverage against the following, arising out of or in connection with execution of Works, their maintenance and performance of the Contract.

25.3.i. Loss of life or injury involving public, employee of the Contractor, or that of Employer and Engineer, labour etc.

25.3.ii. Injury, loss or damages to the Works or property belonging to public, Government bodies, local authorities, utility organisations, contractors, Employer or others.

25.4. **Currency of Policy:** The policies shall remain in force throughout the period of execution of the Works and till the expiry of the maintenance period. The Contractor shall whenever called upon, produce to the Engineer or his representative the various insurance policies taken by him as also the rates of premia and the premia paid by him to ensure that the policies indeed continue to be in force. If the Contractor fails to effect or keep in force or provide adequate cover in the Insurance policies mentioned in the tender or any other insurance he might be required to effect under the Contract, then in such cases, the Employer may effect and keep in force any such insurance or further insurance and the cost and expenses incurred by him in this regard shall be deductible from payments due to the Contractor or from the Contractor's Performance Guarantee.

## 26.0 EMPLOYER'S MATERIAL

- 26.1. **Materials to be supplied by the Employer:** Except for any specific items mentioned in the Special Conditions of Contract, the Contractor is required to supply all materials for the Works. Soon after the acceptance of tender, the Contractor shall give in writing to the Engineer a phased requirement of materials to be supplied by the Employer according to the programme of execution of Works.
- 26.2. **Phased Requirements:** For the materials that are required to be supplied by the Employer to the Contractor, the latter shall give reasonable notice in writing of his phased requirements to the Engineer in accordance with the approved programme for the completion of the Works. At the time of submission of bills, the Contractor shall certify that balance of materials supplied is available at Site.
- 26.3. **Cost to be Borne by Contractor:** The materials shall be issued to the Contractor at the Employer's nominated depots / goods sheds. The Contractor shall bear the cost of loading, transporting to site, unloading, storing under cover as required, assembling and joining the several parts together as may be necessary and incorporating and fixing materials in the Works including all preparatory work of whatever description as may be required, and of closing, preparing, loading and returning empty cases or containers to the place of issue, if so required in the Contract.
- 26.4. **Return of Surplus Materials:** All materials issued to the Contractor by the Employer for use, incorporation or fixing in the Works (including preparatory works) shall, on completion of or before closure of Works, be returned by the Contractor at his expense, at the place of issue, after making due allowances for actual consumption and permissible wastage. However, material considered unserviceable by the Employer will not be taken back. If the Contractor is required to deliver such materials at a place other than the place of issue as specified in this tender, he shall do so and transportation charges from the site to such place less transportation costs which would have been incurred by the Contractor had such materials been delivered at the place of issue shall be borne by the Employer.
- 26.5. **Credit for Returned Materials:** Surplus materials returned by the Contractor shall be credited to him by the Engineer at rates not exceeding those at which those were originally issued to him after taking into consideration any deterioration or damage which may have been caused to the said materials whilst in the custody of the Contractor.
- 26.6. **Remedy for Failure to Return Materials:** If, on completion of works, the Contractor fails to return surplus materials out of those supplied by the Employer, then, in addition to any other liability which the Contractor would incur, the Engineer may, by a written notice to the Contractor require him to pay, within a fortnight of receipt of the notice, for such unreturned surplus materials, at market rates as assessed by the Engineer, plus 14% of the market rates.

## 27.0 TOOLS, PLANTS AND EQUIPMENT SUPPLIED BY THE EMPLOYER

- 27.1. Except for any specific item mentioned in the Special Conditions of Contract, the Contractor is expected to supply all tools, plants and equipment for the Works. In respect of such exceptional tools, plants or equipment committed to his charge by the Employer under terms and conditions specified in the Special Conditions of Contract, the Contractor shall take all reasonable care and shall be responsible for all damages or loss

caused by him, his agents, permitted sub-contractors or his workmen or others while they are in his charge. The Contractor shall sign accountable receipts for tools, plants and equipment made over to him by the Employer and on completion of the Works, shall hand over the unused balance of the same to the Employer in good order and repair, fair wear and tear excepted, and shall be responsible for any failure to account for the same or any damage done thereto. The decision of the Engineer as to the amount recoverable from the Contractor on this account shall be final and binding.

## **28.0 INDEMNITY BY EMPLOYER**

28.1. The Employer shall indemnify the Contractor against all claims, proceedings, damages, costs, charges and expenses in respect of :

28.1.i. the permanent use or occupation of land by the Works or part thereof.

28.1.ii. injuries or damages to persons or property resulting from any act of omission or neglect of the Employer, his agents, servants or other Contractors not being employed by the Contractor, or for or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto. Where the injury or damage is contributed partially by the other Contractor or his servants or agents, the proportion in which the liability will be borne by each party shall be decided by the Engineer and his decision shall be final.

## **29.0 CARE OF WORK**

29.1. From the commencement of the Works until the date stated in the Certificate of Completion for the whole of the Works pursuant to issue of maintenance certificate, the Contractor shall take full responsibility for the care thereof. Provided that if the Engineer shall issue a Certificate of Completion in respect of any part of the Permanent Works for which a separate date of completion is stipulated as provided for in Sub Clause 84.2, the Contractor shall cease to be liable for the care of that part of the Permanent Works from the date stated in the Certificate of Completion in respect of that part and responsibility for the care of that part shall pass to the Employer. Provided further that the Contractor shall take full responsibility for the care of any outstanding work, which he shall have undertaken to finish during the Period of Maintenance. In case any damage, loss or injury shall happen to the Works, or to any part thereof, from any cause whatsoever, save and except the "Excepted risks" as defined in this tender hereof, while the Contractor shall be responsible for the care thereof, the Contractor shall, at his own cost, repair and make good the same, so that on completion, the Permanent Works shall be in good order and condition and in conformity in every respect with the requirements of the Contract and the Engineer's instructions. In the event of any such damage, loss or injury happening from any of the "Excepted risks", the Contractor shall if and to the extent required by the Engineer and subject always to the provision of Clause 90.0, repair and make good the same as aforesaid at the cost of the Employer. The Contractor shall also be liable for any damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of completing any outstanding work or complying with his obligation to clear site on completion or clause 86.0 hereof.

**30.0 CONTRACTOR TO KEEP SITE CLEAR**

During the progress of Works, the Contractor shall keep the Site free from obstructions and shall store neatly any construction plant and surplus materials and clear away and remove from site any rubbish or temporary works no longer required. On completion of the works, the Contractor shall clear away and remove from site all constructional plant, surplus material and temporary works. He should leave the whole of the site and Works in a clean, tidy and workman like condition to the satisfaction of the Engineer.

**31.0 EMPLOYER NOT TO PROVIDE QUARTERS FOR CONTRACTOR**

No quarters shall be provided by the Employer for the accommodation of Contractor or any of his staff employed on Works. Where accommodation is provided to the Contractor at the Employer's discretion, recoveries shall be made at such rates, as may be fixed by the Employer, for full rent of the building, equipment therein as well as charges for electric current, water supply and conservancy.

**32.0 LABOUR CAMP**

- 32.1. **Provision of Labour Camp:** The Contractor shall make his own arrangements for engagement of all labour, local or otherwise, and save in so far as the Contract otherwise provides for the transport, housing (not at the Employer's site), feeding and payment thereof. No labour camp is permitted inside the project site Premises.

**33.0 SAFETY PROVISIONS**

- 33.1. **Safety of Labour:** The Contractor shall, at his own expense, arrange for the safety provisions as required by any Law for time being in force, in respect of labour employed directly or indirectly for performance of the Works, and shall provide all facilities in connection therewith. Safety precautions shall be as warranted by the particular type of work or those directed by the Engineer. Also, mere observance of these precautions shall not absolve the Contractor of his liability in case of loss or damage to property, or injury to or death of any person, including Contractor's labour, Employer's officers, agents or servants or any member of the public.
- 33.2. **Safety of Works and Public:** The Contractor shall provide and maintain at his own cost, all lights, guards, signages, signalmen, fencing and watching arrangements when and where necessary, or as required by the Engineer for the protection of the Works or for safety and convenience of those employed on Works or of the public.
- 33.3. **Recovery of cost from the Contractor:** Should the Contractor fail to make provision as required in the preceding sub clauses, the Employer may provide necessary arrangements, the cost of which shall be recoverable from the Contractor.

**34.0 RATES FOR ITEMS OF WORK TO BE ALL INCLUSIVE**

- 34.1. The rates entered in the accepted Bill of Quantities of the Contract, shall be all inclusive and provide for Works duly and properly completed in accordance with these Conditions of Contract, Special Conditions of Contract and the Specifications and Drawings,

together with such enlargement, extension, diminution, reduction, alteration or addition, as may be ordered in terms of conditions of Contract, and without prejudice to the generality thereof, shall inter-alia be deemed to include and cover all charges relating to labour and superintendence thereof, supply including all cost and freight of materials, stores, equipments, profiles, moulds, cuttings, centerings, scaffoldings, shuttering, machinery, derricks, tackles, ropes, pegs, posts, tools and all apparatus and plants, required at / for the work, and contingencies, except such items as may be specified in the Special Conditions of Contract to be supplied to the Contractor by the Employer. The rates quoted shall also include:

- 34.1.i.1. Erection, maintenance and removal of all temporary works and buildings.
- 34.1.i.2. All watching, lighting, pumping and draining unless otherwise provided for.
- 34.1.i.3. All barriers and arrangements for safety of the property, utilities, public or of employees / workers during the execution of Works.
- 34.1.i.4. All sanitary and medical arrangements for labour camps as may be prescribed. - The setting out of all works of construction, repair and upkeep of all centre lines, benches, brackets, etc.
- 34.1.i.5. Site clearance.
- 34.1.i.6. All taxes, royalties, duties, cess, octroi and other levies payable to various authorities.
- 34.1.i.7. Nothing extra shall be payable over the quoted rates, notwithstanding any provision to the contrary in any law for the time being in force, save and except what is specifically provided in General or Special Conditions of Contract.
- 34.1.i.8. The Employer will make efforts to get some or all of taxes, royalties, duties, cess, octroi and other levies payable to various authorities, waived fully or partially. The Contractor shall maintain complete records on the amounts paid on these accounts and advise the Employer the details every month. In case the waiver becomes effective, the Contractor will be advised for getting the refund from the concerned authority. He will arrange for the same and remit the amount to the Employer. In case of failure by the Contractor to remit such amounts, the same will be recovered from the pending dues of the Contractor.

### **35.0 SUPPLY OF WATER AND ELECTRICAL POWER**

The Contractor shall be responsible for arrangements to obtain supply of water, or electrical power, necessary for the Works. In the event the Employer is in a position to supply water or electrical power, or both, required for Works, such supply will be given only at one point near the Site. The cost of making necessary connections to the Employer's distribution system and laying of necessary pipe line, specials, valves, meter for water supply or the laying of underground / overground conductor, circuit protection, electric power meters and transmission structures in case of electric power, shall be borne by the Contractor. The Contractor shall bear

the cost of water and power supplied, the rates for which shall be determined and notified by the Engineer. The decision of the Engineer on such cost shall be final. Any increase in Water / Power tariff by supply agency with either prospective or retrospective effect shall be borne by the Contractor.

### **36.0 URGENT REPAIRS**

If, by reason of any accident, or failure, or other event occurring to or in connection with the Works, or any part thereof or proximity thereof, either during the execution of the Works, or during the Period of Maintenance, any remedial or other work or repair shall, in the opinion of the Engineer or the Engineer's Representative, be urgently necessary for the safety of the Works, adjoining property, traffic, utility or public and the Contractor is unable or unwilling to do such work or repair at once, the Employer or the Engineer on behalf of the Employer may employ and pay other persons to carry out such work or repair, as the Engineer or the Engineer's Representative may consider necessary. If the work or repair so got done by the Employer is work which, in the opinion of the Engineer, the Contractor was liable to do at his own expense under the Contract, all expenses properly incurred by the Employer in so doing, shall be recoverable from the Contractor by the Employer, or may be deducted by the Employer from any monies due or which may become due to the Contractor Provided always that the Engineer or the Engineer's Representative, as the case may be, shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof in writing.

### **37.0 SETTING OUT**

The Contractor shall be responsible for the true and proper setting out of the Works, in relation to the original points, lines and levels of reference given by the Engineer in writing and for the correctness, subject as above mentioned, of the positions, levels, dimensions and alignment of all parts or the works, and for the provision of all necessary instruments, appliances and labour, in connection therewith. If any time during the progress of Works, any error appears or arises in any part of the work, the Contractor, on being required so to do by the Engineer shall at once rectify such error, to the satisfaction of the Engineer or his representatives. The checking of any setting out, or of any line or level by the Engineer or his representative, shall not in any way relieve the Contractor of his responsibility for the correctness thereof, and the Contractor shall carefully protect and preserve all bench marks, sight rails, pegs and other things used in setting out the Works.

### **38.0 ILLEGAL GRATIFICATION**

- 38.1. **Bribe, commission, gift or advantage:** Any bribe, commission, gift or advantage given or offered by the Contractor directly or through his partner, agent or servant to any officer or employee of the Engineer or Employer, or to any person on their behalf, in relation to obtaining or the execution of this or any other Contract with the Engineer or the Employer, shall in addition to any criminal liability which he may incur, subject the Contractor to rescission of the Contract and all other Contracts with the Employer, and liability for payment of any loss or damage to the Employer, resulting from such rescission. The Employer shall be entitled to deduct the amounts so payable from any money / moneys due to the Contractor alone, or jointly under the Contract or any other contract with the Employer. The Contractor shall not be due, nor shall be paid any



compensation whatsoever for any loss, alleged or actual, suffered by him when the Contract is so rescinded. Contract and all other Contracts with the Employer. The Contractor shall be liable to pay compensation for any loss or damage to the Employer resulting from such rescission and the Employer shall be entitled to deduct the amounts so payable from the money (s) due to the Contractor.

38.2. **Settlement of dispute as to commission of such offence:** If any question or dispute as to the commission of any such offence arises under Sub clauses 47.1, the same shall be settled by the Engineer, in such manner as he shall consider fit and proper, and his decision shall be final and binding.

38.3. **Compensation to Contractor on rescission of Contract under this clause:** In the event of rescission of Contract under Sub-clause 47.1 the Contractor shall not be entitled to any compensation whatsoever, except for the work done up to the date of rescission.

#### 39.0 DISCLOSURE OF RELATIONSHIP:

If the Contractor or any partner of the Contractor or Director of the Contractor's company is closely related to any of the Officers of the Employer or the Engineer, or alternatively, if any close relative of an officer of the Employer or the Engineer has financial interest / stake in the Contractor's firm, the same shall be disclosed by the Contractor at the time of filing his tender. Any failure to disclose the interest involved, shall entitle the Employer to rescind the Contract, without payment of any compensation to the Contractor.

#### 40.0 CLEARANCE OF SITE ON COMPLETION

On completion of Works, the Contractor shall clear away and remove from site all constructional plant, surplus materials, rubbish and temporary works of every kind, and leave the whole of the site of work clean, tidy and in a workmanlike conditions to the satisfaction of the Engineer. No final payment in settlement of the accounts for Works shall be made or held to be due to the Contractor, till, in addition to any other condition necessary for such final payment, site clearance shall have been effected by him. Such clearance may be made by the Engineer through any other agency at the expense of the Contractor in the event of the Contractor's failure to comply with this provision within 7 days after receiving notice to that effect from the Engineer. Should it become necessary for the Engineer to have the site cleared at the expense of the Contractor, the Employer and / or the Engineer shall not be held liable, for any loss or damage to Contractor's property on the site due to such removal therefrom. Removal may be effected by means of public sale of such plant, materials and property or in such a manner as may be deemed fit and proper by the Engineer. All expenses on such removal / clearance shall be debitable to the Contractor as loans due from the Contractor to the Employer, and the Employer shall be competent to recover the same from Contractor's on-account or final bills, or from Performance Guarantee amount or from any other amount payable to the Contractor.

#### 41.0 ENGAGEMENT OF LABOUR

41.1. **Contractor to Provide Labour:** The Contractor shall make his own arrangements for the engagement of all labour, except as provided otherwise in the Contract, and shall provide for their transport, housing and payment.

41.2. **Employment of Labour Below the Age of 18:** The Contractor shall not employ children

below the age of 18 or the age prescribed in any labour legislation, whichever is higher, as labourers, directly or through petty contractors or sub-contractors, for execution of the Work.

## 42.0 WAGES TO LABOUR

- 42.1. In dealing with labour and employees, the Contractor and his sub-contractors (including piece rate and petty Contractors) shall comply fully with all laws and statutory regulations such as the Payment of Wages Act, 1936, the Minimum Wages Act, 1948, Workman's Compensation Act, 1923, The Contract Labour (Regulations and Abolition) Act, 1970, Employer's Liability Act, 1938, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, Employees Provident Funds and Miscellaneous Provisions Act, 1952, Employees State Insurance Act, 1948, Equal Remuneration Act, 1976, Payment of Gratuity Act, 1972, Apprentices Act, 1965, Mines Act, 1952, and other laws or regulations framed by competent legislative authorities from time to time, as may be applicable. In accordance with the various Acts and regulations with all upto date amendments, the Contractor shall ensure that he and his subcontractors (including petty and piece rate contractors) observe strictly inter- alia the following:
- 42.1.i. Wages paid are not less than those prescribed;
  - 42.1.ii. Wages and other dues are paid regularly and in time;
  - 42.1.iii. Liens / Licenses are obtained as required under any of the Acts or regulations;
  - 42.1.iv. Maintain prescribed records, submit necessary statements to authorities concerned and display required notices; and
  - 42.1.v. Take prompt action on any instructions/directions from the authorities under various labour laws.
- 42.2. **Supply of Labour by the Contractor:** If, the Contractor directly or through petty contractors or sub-contractors supplies any labour to be used wholly or partly under the direct orders and control of the Engineer or the Employer, whether in connection with any work being executed by the Contractor or otherwise for the purposes of the Employer, such labour shall, for the purpose of this clause, be deemed to be persons employed by the Contractor,
- 42.3. **Claim on account of violation of Labour laws:** If any moneys shall, as a result of any instructions, directions or decisions from the Authorities or claim or application made under any of the labour laws or regulations, be directed to be paid by the Employer, such moneys shall be deemed to be moneys payable to the Employer by the Contractor and on failure of the Contractor to repay the Employer any moneys paid or to be paid by it as aforesaid within seven days after the same shall have been demanded, the Employer shall be entitled to recover the amount from any moneys due or accruing to the Contractor under this or any other Contract with the Employer. The Employer shall not be bound to contest any such claim or demand unless the Contractor makes a written request for it, the Contractor's reasons for contesting are considered reasonable by the Engineer and the Contractor deposits the full cost that the Employer may have to incur in contesting the case.

#### 43.0 REPORT OF ACCIDENTS TO LABOUR

The Contractor shall be responsible for safety of all employees, employed by him on Works, directly or through petty contractors or sub-contractors, and shall report accidents to any of them, however, and wherever occurring on Works, to the Engineer or the Engineer's Representative, and shall make every arrangement to render all possible assistance and to provide prompt and proper medical attention. The compensation for affected Workers or their relatives shall be paid by the Contractor in such cases immediately in accordance with the Workmen's Compensation Act.

#### 44.0 MATERIALS AND WORKMANSHIP

- 44.1. **Material and workmanship as per specification:** All materials and workmanship shall be of the respective kinds described in the Contract and in accordance with the Engineer's instructions and shall be subjected from time to time to such tests as the Engineer may direct at the place of manufacture or fabrication, or on the Site or at such other place or places as may be specified in the Contract, or at all or any of such places. The Contractor shall provide such assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used and shall supply samples of materials before incorporation in the Works for testing as may be selected and required by the Engineer.
- 44.2. Sources of materials being supplied shall be intimated to the Engineer and are subject to his approval. Materials that are not specified in the Contract document shall conform to the relevant Indian Standards or International standards as specified in the contract.
- 44.3. **Supply of sample:** All samples shall be supplied by the Contractor at his own cost as specified in the contract.
- 44.4. **Cost of test provided in Contract:** The cost of making any test shall be borne by the Contractor if such test is clearly intended by or provided for in the Contract.
- 44.5. **Cost of test not provided in Contract:** If any test is ordered by the Engineer which is either:
- 44.5.i. Not so intended by or provided for in the Contract, or is not so particularised in the Contract, or
  - 44.5.ii. Though so intended or provided for is ordered by the Engineer to be carried out by an independent person at any place other than the Site or the place of manufacture or fabrication of the materials tested.

Then the cost of such test shall be borne by the Employer. If, however, the test shows the workmanship or materials not to be in accordance with the provisions of the Contract or the Engineer's instructions, then the cost of such test will be charged to the Contractor.

#### 45.0 REMOVAL OF IMPROPER MATERIALS AND WORKS

- 45.1. The Engineer shall have the authority to order in writing from time to time :
- 45.1.i. The removal from site within such time, as the Engineer may specify, any material, which in his opinion, is not in accordance with the Specifications and Conditions of the Contract.
  - 45.1.ii. The substitution of defective material by proper and suitable material; and
  - 45.1.iii. The removal and proper re-execution, notwithstanding any previous decision or interim payment thereof, of any work which in respect of materials or workmanship is not, in the opinion of the Engineer, in accordance with the Contract.
- 45.2. In case of default on the part of the Contractor in carrying out such order, the Employer shall be entitled to employ and pay other parties, to carry out the same, and all expenses consequent thereof or incidental thereto, shall be recoverable from the Contractor or may be deducted by the Employer from any money which may be due to the Contractor.

#### **46.0 COVERING UP OF WORK**

- 46.1. **Examination of work before covering up:** No work or part of work shall be covered up or put out of view, without the prior approval of the Engineer or the Engineer's Representative, and the Contractor shall afford full opportunity for the Engineer or the Engineer's Representative, to examine and measure any work, which is to be covered up, and to examine foundations before the permanent work is placed thereon. The Contractor shall give due notice to the Engineer's Representative, whenever any such work or foundation is ready for examination, and the Engineer's representative shall without delay, attend for the purpose of examining and measuring such work or for the purpose of examining such foundations.
- 46.2. **Cost of uncovering the work already covered up:** The Contractor shall uncover any part or parts of the Works, or make openings in or through the same, as the Engineer may from time to time direct, and shall reinstate and make good such part or parts, to the satisfaction of the Engineer. If any such part or parts have been covered up, or put out of view after compliance with the requirement of Sub-clause 56.1 and the Works are found to be executed in accordance with the Contract, the expenses of uncovering, making openings in or through, reinstating and making good the same, shall be borne by the Employer, but if the Works are found to be defective, all such costs shall be borne by the Contractor.

#### **47.0 SUSPENSION OF WORKS:**

- 47.1. **Protection during suspension of work:** The Contractor shall, on the order of the Engineer, suspend the Works or any part thereof, for such time, and in such manner, as the Engineer may consider necessary, and shall during such suspension, properly protect and secure the Works so far as it is necessary in the opinion of the Engineer.
- 47.2. **Cost Incidental to suspension of work:** If such suspension is
- 47.2.i. Provided for in the Contract, or

- 47.2.ii. Necessary for proper execution of Works or by reasons of weather condition or by some default on the part of the Contractor, or
  - 47.2.iii. Necessary for the safety of Works or any part thereof or
  - 47.2.iv. Necessary for the safety of adjoining public or other property or safety of the public or workmen or those who have to be at the site or
  - 47.2.v. To ensure safety and to avoid disruption of traffic and utilities, as also to permit fast repairs and restoration of any damaged utilities, the Contractor shall not be entitled to extra cost (if any), incurred by him, during the period of suspension of Work.
- 47.3. **Extension of time on account of suspension:** If suspension is ordered by the Engineer for reasons other than and when each such period of suspension exceeds 14 days but does not exceed 30 days, at any one time, the Contractor shall not be entitled to extra costs, if any, incurred by him during the period of suspension of work, but the Contractor shall be entitled to such extension of time for completion of the work, as the Engineer may consider proper, having regard to the period of such suspensions. For any such suspension of work not exceeding 14 days at any one time, the Contractor will not be entitled to any extension of time for completion of the work except where specifically agreed to by the Engineer.
- 47.4. **Compensation for idle labour / plant due to extension of time:** If the suspension exceeds 30 days, at any one time, the Contractor shall be entitled to extension of time for completion of the Works, as the Engineer may consider reasonable having regard to the periods of such suspension. He shall also be entitled to compensation on account of any idle labour / employees and idle plant / machinery, which could not be diverted for use elsewhere during the period of suspension. Every effort shall, however, be made by the Contractor, to direct these resources for use elsewhere. The compensation so payable, shall be calculated at the actual daily rate of wages payable to the employees / labour rendered idle, and 70% of the rate for hire charges for plant and machinery as assessed by the Engineer, (excluding cost of fuel and lubricants) plus an additional 15% above all these items, to cover overhead costs. The Contractor shall furnish documentary proof to the satisfaction of the Engineer on the numbers of employees/labour rendered idle, the period for which rendered idle and the daily rates of wages payable to them. Similarly he will also furnish details of the number of different types of Plant/Machinery rendered idle, the period for which rendered idle and the hire charges for the same. The decision of the Engineer shall be final on the amount of compensation payable on account of any idle labour/employees and idle plant/machinery. Recovery of instalments towards all advances shall remain suspended during the period the suspension of work lasts, and no interest on advance shall be charged for the said period of suspension. However, if only a portion of the Works has been suspended, Engineer shall permit postponement of advance recovery and waiver of interest charges, only on the portion of advances as considered reasonable by him.
- 47.5. **Contractor's option to ask for closure of Contract:** If the suspension of the whole of the Works, or any part or group of the Works exceeds 90 days, the Contractor shall have the option to ask for closure of the Contract, or deletion from the

Contract of that part of Works which has been suspended. In that event, the Contractor shall not be entitled to any compensation for damage or loss, alleged or actual and for loss of any profits anticipated.

#### **48.0 COMMENCEMENT OF WORK**

The Contractor shall commence the Works as soon as is reasonably possible after the receipt by him of a notice to this effect from the Engineer, within the time limit as specified in the "Instructions to Tenderers". Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.

#### **49.0 PROGRAMME OF WORK**

The Contractor shall, on receipt of letter of award of his tender, or as soon as thereafter as possible, but not later than 7 days from the date of receipt of letter of award, submit to the Engineer for his approval, a detailed programme, showing the order and procedure in which he proposes to carry out the work so as to complete the whole of the Works within the "Time for Completion" stipulated in "Instruction to Tenderers". Any requirement for completion of any part or parts of the Works before completion of the whole of the Works should be reflected in the programme. The Contractor shall, whenever required by the Engineer or the Engineer's Representative, also provide in writing for their information, a general description of the arrangements and method of deployment of labour and machinery which the Contractor proposes to adopt for the execution of the Works. If at any time it should appear to the Engineer that the actual progress of work does not conform to the approved programme, referred to above, the Contractor shall produce at the request of the Engineer, a revised programme showing modifications to the approved programme, necessary to ensure completion of the work within the time for completion stipulated in the Contract. The submission to and approval by the Engineer or Engineer's representative of such programme or the furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities or obligations under the Contract. The Engineer shall have full power and authority during progress of work, to issue such instructions as may be necessary for the proper and adequate execution and maintenance of the Work. The Contractor shall carry out and be bound by the same. The programme finally approved by the Engineer shall supersede the one submitted earlier with the Tender as per "Instruction to Tenderers".

#### **50.0 POSSESSION OF SITE**

Save insofar as the Contract may prescribe, the extent of portion of the Site of which the Contractor is to be given possession from time to time, and the order in which such portions shall be made available to him and, subject to any requirement in the Contract as to the order in which the Works shall be executed, the Employer will, on the Engineer's written order to commence the Works, give to the Contractor, possession of so much of the Site, as may be required to enable the Contractor to commence and proceed with the execution of the Works in accordance with the programme referred in contract if any, and otherwise in accordance with such reasonable proposals of the Contractor as he shall, by written notice to the Engineer, make. The Employer will, from time to time as the Works proceed, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due despatch in accordance with the said programme or proposals, as the case may be. If the Contractor suffers delay or incur extra cost as a result of failure on the part of the Employer to give possession of site in accordance with

the terms of this Clause, the Engineer may on Contractor's request, grant extension of time for the completion of the Works and / or certify such sum, as in his opinion, shall be fair to cover the extra cost incurred, which sum shall be paid by the Employer to the Contractor provided further that if the Employer is unable to give possession of the site for a small portion of the Works, the Employer, or the Engineer on his behalf, may delete the work at that site from the scope of the Contract and ask the Contractor to complete the rest of the work. The Contractor shall complete the same within the time frame stipulated in the Contract without any extra payment. The decision of the Engineer as to extra cost as referred to above in this clause shall be final.

## **51.0 WAYLEAVES**

The Contractor shall bear all costs and charges, for special or temporary wayleaves required by him, in connection with access to the Site. The Contractor shall also provide at his own cost, any additional accommodation outside the Site required by him for the purposes of the Works.

## **52.0 ACCESS TO SITE OF WORK**

- 52.1. **Access for Engineer:** The Employer or the Employer's representative, shall, at all times have access to the Works and to all workshops and places, where work is being performed from where materials, manufactured articles or machinery are being obtained for the Works, and the Contractor shall afford every facility and every assistance in obtaining the right to such access.

## **53.0 DELAY AND EXTENSION OF CONTRACT PERIOD**

- 53.1. **Time to be essence and Extension of Time:** The time allowed for execution and completion of the Works or part of the Works as specified in the Contract, in accordance with these conditions, shall be the essence of the Contract on the part of the Contractor. Subject to any requirement in the Contract as to completion of any portion or portions of the works before completion of the whole, the Contractor shall fully and finally complete the whole of the Works comprised in the Contract by the date stipulated in the Contract or extended date in accordance with the Contract. In case of delay on the part of the Contractor, the Contractor shall pay as compensation an amount as provided herein..

As soon as it becomes apparent to the Contractor, that the Works and / or portions thereof (required to be completed earlier) cannot be completed within the period (stipulated in the Contract, or the extended periods granted, he shall forthwith inform the Engineer and advise him of the reason(s) for the delay, as also the extra time required to complete the works and / or portions of work, together with justification thereof. In all such cases, whether the delay is attributable to the Contractor or not, the Contractor shall be bound to apply for extension in the period of completion of the whole works and / or portions thereof. This application shall reach the Engineer, at least 30 days before the stipulated or extended date of completion of the whole works or the stage completion date of any portion of the work. In case the Contractor fails to apply for the extension of Contract or fails to apply in time, the Engineer, shall, in the case of any subsequent delay in the completion of the whole and / or portion of works, be justified to hold that such delay is due only to Contractor's failure or fault and shall take further action accordingly in terms of the Contract. Any reasons or circumstances

resulting in delay in the completion of the work s) even if they are not the result of the Contractor's failure or fault, shall not invalidate or vitiate the Contract.

- 53.2. **Extension due to Modifications:** If any modifications ordered by the Engineer or site condition actually encountered are such, that in the opinion of the Engineer the magnitude of the work has increased materially, then such extension of the stipulated date of completion may be granted, as shall appear to the Engineer to be reasonable.
- 53.3. **Delays not due to Employer / Contractor:** If the completion of the whole works (or part thereof which as per the Contract is required to be completed earlier), is likely to be delayed on account of:
- 53.3.i. Any force majeure event as referred in the COC
  - 53.3.ii. Delay on the part of other Contractors or other parties engaged directly by the Employer on whose progress the performance of the Contractor necessarily depends.
  - 53.3.iii. Any order of Court.
  - 53.3.iv. Any other event or occurrence which, according to the Engineer is not due to the Contractor's failure or fault, and is beyond his control; the Engineer may grant such extension in period of completion of the work(s), as in his opinion is reasonable.
- 53.4. **Delay due to Employer or Engineer:** In the event of any failure or delay by the Employer or the Engineer, to hand over to the Contractor the possession of site necessary for execution of Works, or any part of the Works if different dates for handing over the site for different Works have been indicated in the Contract, or to give necessary notice to commence the Works, or to provide necessary Drawings or instructions or clarifications or to supply any material, plant or machinery, which under the Contract, is the responsibility of the Employer, then such failure or delay, shall in no way affect or vitiate the Contract or alter the character thereof; or entitle the Contractor to damages or compensation thereof but in any such case, the Engineer shall grant such extension or extensions of time to complete the work, as in his opinion is / are reasonable.
- 53.5. **Delays due to Contractor:** If the delay in the completion of the whole Works or a portion of the Works, for which an earlier completion period is stipulated, is due to the Contractor's failure or fault, and the Engineer feels that the remaining Works or the portions of Works can be completed by the Contractor in a reasonable and acceptable short time, then, the Engineer may allow the Contractor extension or further extension of time, for completion, as he may decide, subject to the following:
- 53.5.i. Without prejudice to any other right or remedy available to the Employer on that behalf, by way of ascertained and liquidated damages, recover a sum equivalent to one half of one percent of the Contract Value of the works, for each week or part of a week the Contractor is in default.
  - 53.5.ii. If the delay relates only to a portion of the Works with a separate and earlier completion period, the Contract Value shall be restricted to the cost of that



portion of the works only.

- 53.5.iii. The total recovery on account of compensation shall be limited to 10% of the Contract Value of the Works, or the portion of the Works, as the case may be.
- 53.6. Time to continue to be the essence of Contract in spite of extension of time. It is an agreed term of the contract that notwithstanding grant of extension of time under any of the sub-clauses mentioned herein, time shall continue to be the essence of contract on the part of the Contractor.
- 53.7. Engineer's decision on compensation payable being final. The decision of the Engineer as to the compensation payable by the Contractor under this Clause shall be final and binding.

#### **54.0 FORE-CLOSURE OR TERMINATION OF CONTRACT**

##### **54.1. Payment to Contractor on fore-closure or termination of Contract:**

- 54.1.i. The Employer shall be entitled to foreclose and terminate the Contract, at any time, should, in the Employer's opinion, the cessation of works becomes necessary, owing to paucity of funds or due to court orders or from any other cause whatsoever. Notice in writing from the Employer, of such termination and reasons therefor, shall be conclusive evidence thereof and be binding on the Contractor. In such a case, the value of approved materials actually brought to the site and reasonably required to execute the Works during next three months, as per approved programme, and of Work done up-to-date by the Contractor, shall be paid for in full by the Employer, at rates specified in the Contract. If rates for any materials or items of work are not available in the Contract, these shall be fixed by the Engineer by taking into account market rates or by adopting the procedure set forth. In addition, a sum not exceeding 2% (two percent) of the value of the work remaining incomplete on the date of closure (i.e. total stipulated value of Contract less the value of works actually done in terms of Contract and paid for and less the cost of materials at site taken over by the Employer and paid for as aforesaid), shall be payable to the Contractor, to allow for expenditure incurred on preliminary site work, not fully covered by payments effected and for transportation of Contractor's tools, plants and materials, scaffolding and shuttering, etc. as also labour and other personnel back to his depot, notwithstanding whether the sum actually spent by the Contractor on all these items is more or less than the amount paid under this Clause. If any materials supplied by the Employer to the Contractor which was charged to the Contractor are rendered surplus, the same shall be returned by the Contractor to the Employer's depot at Contractor's cost and full credit at rates initially charged to the Contractor, shall be allowed for such materials. Similarly, any plant, equipment or tool issued by the Employer to the Contractor free of cost or on lease terms shall be returned by the Contractor to Employer's depot at his own cost. The Employer shall be entitled to recover the cost of unreturned material, plant, equipment and tools from the Contractor where such materials have been supplied free of cost and plant, equipment and tools free of cost or on lease basis to the Contractor as stipulated in the Special Conditions of Contract. In case of such unreturned

materials, recovery to be effected from the Contractor will be as indicated. In case of such unreturned plant, equipment and tools, the amount to be recovered from the Contractor shall be decided by the Engineer and this shall be final and binding. The Contractor shall have to pay back unrecovered portion of advances made to him, together with accrued interest thereon. In case the Contractor defaults, the Employer shall be entitled to recover the amounts from any payment due to the Contractor, or from the Performance Guarantee amount or by encashing the Bank Guarantees given by the Contractor for securing the advances. This is without prejudice to other remedies available to the Employer.

- 54.1.ii. Provided further, that any reduction of quantities against individual items of the Contract, merely as a variation when the work is executed, shall not constitute foreclosure of Contract in terms of this clause, and no compensation whatsoever as per this clause will be due or payable to the Contractor on that account.

**54.2. Default of Employer:**

- 54.2.i. In the event of the Employer:

- 54.2.i.1. Failing to pay to the Contractor the amount due under any certificate of the Engineer, within ninety days after the same shall have become due under the terms of the Contract, subject to any deduction that the Employer is entitled to make under the Contract, or
- 54.2.i.2. Becoming bankrupt or
- 54.2.i.3. Being a company, going into liquidation or
- 54.2.i.4. The Contractor shall then be entitled to issue a notice to the Engineer, with a copy to the Employer, stating that he shall be terminating the Contract after 30 days of receipt of the notice by the Engineer, for reasons stated in the notice. If within the said period of 30 days, the Engineer notifies the Contractor with a copy to the Employer, that the reasons stated in the notice of the Contractor are not valid or that the alleged reasons of default of the Employer have been remedied and no longer exist, then the Contractor shall not be entitled to terminate the Contract.
- 54.2.i.5. Subject to the Engineer not raising any objection to the notice of termination of the contract by the Contractor, upon expiry of 30 days notice as per para (i) of this Sub-clause, the Contract shall stand terminated and the Contractor shall remove from site all balance material and constructional plant and equipment brought by him thereon, with all reasonable despatch.
- 54.2.i.6. In the event of termination of Contract under this Clause, the Employer shall be under the same obligations to the Contractor in regard to payment, as if the Contract had been terminated under the provisions of Sub-clause hereof, but, in addition to the payments specified in Sub-clause hereof, the Employer shall pay to the Contractor, an amount for

actual loss or damage to Contractor arising out of or in connection with or as a result of such termination. The Engineer's decision on the amount payable on this account shall be final and binding.

#### **55.0 RESCISSION OF CONTRACT DUE TO DEATH OF CONTRACTOR/PARTNER**

If the Contractor is an individual or a sole proprietary concern, and the individual or the sole proprietor dies, or if the Contractor is a partnership concern and one of the partners dies, in that case unless the Employer is satisfied that the legal representative of the individual Contractor or of the sole proprietor, as the case may be, or in the case of a partnership firm, all surviving partners, are capable of carrying out and completing the Contract, the Employer shall be entitled to rescind the Contract as to its incomplete part. In that event, the Employer shall not be liable to pay any compensation to the legal heirs of the deceased Contractor and / or to the surviving partners of the Contractor's firm, on account of such cancellation of Contract. The Engineer's decision as to whether the legal representatives of the deceased Contractor or surviving partners of the Contractor firm can or cannot carry out and complete the Contract, shall be final and binding on the parties. Provided further that the legal representatives of the Deceased Contractor the surviving partners shall also not be liable to pay any damages actually suffered by the Employer, in respect of incomplete part of the Contract. Any liability incurred by the deceased Contractor, or by the deceased partner of the contracting firm, before his death, shall be recovered from the legal representatives of the deceased Contractor or from the surviving partners of the said contract firm as the case may be.

#### **56.0 DETERMINATION OF CONTRACT DUE TO CONTRACTOR'S DEFAULT**

##### **56.1. Conditions leading to determination of Contract:**

##### **56.1.i. If the Contractor,**

- 56.1.i.1. Becomes bankrupt or insolvent or**
- 56.1.i.2. Makes arrangements with or assignment in favour of his creditor, or agrees to carry out the Contract under a committee of inspection of his creditors or**
- 56.1.i.3. Being a Company or Corporation goes into liquidation by a resolution passed by the Board of Directors / General body of the share holders or as a result of Court order (other than voluntary liquidation for the purpose of amalgamation or reconstruction); or**
- 56.1.i.4. Has received execution order by Court levied on his goods or property on the Works, or**
- 56.1.i.5. Assigns or sublets the Contract or any part thereof otherwise than as provided for under conditions of this Contract, or**
- 56.1.i.6. Abandons the Contract, or**
- 56.1.i.7. Persistently disregards instructions of the Engineer or contravenes any provisions of the Contract, or**

- 56.1.i.8. Fails to adhere to the agreed programme of work or fails to complete the works or parts of the Works within the stipulated or extended period of completion, or is unlikely to complete the whole Work or part thereof within time because of poor record of progress; or
- 56.1.i.9. Fails to remove materials from the Site, or pull down and replace work, after receiving notice from the Engineer to the effect that the said materials or Works have been condemned or rejected, or
- 56.1.i.10. Fails to take steps to employ competent and/or additional staff and labour, or
- 56.1.i.11. Fails to afford the Engineer or his representative
- 56.1.i.12. Proper facilities for inspecting the Works or any part thereof, or
- 56.1.i.13. Suppresses or gives misleading information while submitting the tender, then, and in any such case, the Engineer or the Employer shall be entitled, after giving 7 days' notice in writing, under his hand or under the hand of the Engineer, to rescind the Contract, as a whole or in part or parts (as may be specified in such notice).
- 56.1.ii. In such a case of rescission, the Employer may adopt either or both of the following courses:
  - 56.1.ii.1. Take possession of the site and any materials, constructional plants, implements, stores, etc. thereof, and carry out the whole or part of the Work from which the Contractor has been removed by the employment of the required labour and materials, the cost of which shall include lead, lift, freight, supervision and / or incidental charges.
  - 56.1.ii.2. Measure up whole or part of the Work from which the Contractor has been removed, and get it completed by another Contractor; and the manner and method in which such work is to be completed, shall be entirely in the discretion of the Engineer whose decision shall be final.
  - 56.1.ii.3. The Engineer at its sole discretion may terminate only part of the Contract also by taking out some part of the total scope of work and may complete or arrange for any other entity through the process of open/ limited / single tender or by calling quotations, to do so at the risk and cost of the Contractor.
- 56.2. **Entitlement of Employer:** In both cases described in sub-clause 56.1.ii above, the Employer shall be entitled to:
  - 56.2.i. Forfeit the whole or such portion of the Performance Guarantee amount, as he may consider fit, and
  - 56.2.ii. Recover from the Contractor the cost of carrying out the balance work in excess of the sum which he would have been paid according to the certificate of the Engineer, if the works had been carried out and completed by the Contractor

under the terms of contract. Such certificate shall be final and binding upon the Contractor. The amount to be recovered may be deducted by the Employer from any monies then due or which, at any time thereafter, may become due to the Contractor alone or jointly under this or any other Contract or otherwise.

- 56.3. **Non-exercise of power not to constitute waiver:** Provided always that in case any of the powers conferred upon the Employer, shall have become exercisable, and the same may not have been exercised, the non-exercise thereof shall not constitute waiver of any of the conditions thereof. Any such powers shall, notwithstanding, be exercisable in the event of any future case of default by the Contractor for which his liability in the past or future shall remain unaffected.

## 57.0 MODIFICATIONS TO WORK

- 57.1. **Authority to order modifications:** The Engineer acting on behalf of the Employer, shall be competent by an order in writing to enlarge or extend, diminish or reduce the Works or make any alterations in their design, character, position, site, quantities, dimensions or in the method of execution or in the combination or use of materials for the execution thereof and to order any additional works to be done or any work not to be done and save as provided under the Contractor will not be entitled to any compensation for any reduction, but will be paid only for the actual amount of work done and for approved materials supplied at site up to the date of intimation of such reduction, diminution or alteration.
- 57.2. **Modification not to affect the Contract:** The enlargement, extension, diminution, reduction, alterations or additions, shall in no degree affect the validity of the Contract, but shall be performed by the Contractor as provided therein and be subject to the same conditions, stipulations, obligations and rates as if they had been originally and expressly included and provided for in the schedules, specifications and drawings, and the amount to be paid therefor shall be calculated in accordance with accepted schedule of rates and other extra items of works at the rates, determined under Clause 67.0 of these conditions. Provided that if the nature or amount of any variation relative to the nature or amount of the whole of the works shall be such that in the opinion of the Engineer, the rate for any item in the accepted Bill of Quantities is by reason of such variation rendered unreasonable or inapplicable, the Engineer shall fix such other rate or extra payments (plus or minus), as in the circumstances, he shall consider reasonable and proper.
- 57.3. **Decision of Engineer to be final:** The decision of the Engineer under this clause shall be final.

## 58.0 MODIFICATIONS TO CONTRACT TO BE IN WRITING

In the event of any provisions of the Contract requiring to be modified after the agreement has been signed, the modifications shall be made in writing and signed by the Employer or the Employer's authorised representative and the Contractor or his authorised representative. Such modifications shall not be effective until the same have been signed by both the Parties. Any verbal or written arrangements for abandoning, modifying, extending, reducing or

supplementing the Contract, or any of the terms therefor, shall be deemed to be provisional and shall not be binding on the Employer unless and until the same are incorporated in a formal instrument and signed by the Employer or his authorised representative and the Contractor or his authorised representative.

## **59.0 MEASUREMENTS OF WORK AND PAYMENTS**

- 59.1. **Quantity in Bill of Quantity only estimated quantity:** The quantities set out in the accepted Bill of Quantities, are the estimated quantities of the Works, and they shall not be taken as the actual and correct quantities of the work to be executed by the Contractor, in fulfilment of his obligations under the Contract.
- 59.2. **Payment on actual measurements:** The Contractor shall be paid for the Works, at rates in the accepted Bill of Quantities of the Contract, and for additional and extra items of work at rates determined, on the measurements taken by the Contractor or his Agent in the presence of the Engineer or Engineer's representative.
- 59.3. **Measurement of work at regular intervals:** Such measurements shall be taken of the work in progress from time to time, and at such intervals, as in the opinion of the Engineer, shall be proper, having regard to the progress of the work. On an agreed date and time, the Contractor or his authorised agent shall take the on-account or final measurements in the presence of Engineer or Engineer's representative, in the Measurement Books to be supplied by the Engineer. The Contractor or his authorised agent shall sign the result of the measurements, which shall also be signed by the Engineer or the Engineer's representative as an acknowledgement and acceptance of the accuracy thereof.
- 59.4. **Measurement of works as per records and drawings:** For the purpose of measuring such permanent works, as are to be measured by records and drawings, the Contractor shall prepare records and drawings month by month of such work, and submit the same to the Engineer or Engineer's Representative for his agreement on such records and drawings. The Engineer or the Engineer's Representative shall have the right to delete or correct any measurement if it is found at a later stage that the work is incomplete, defective and / or not conforming to the specifications.

## **60.0 INTERIM PAYMENTS :**

- 60.1. **Payment for works:**
- 60.1.i. Progressive payment shall be made on monthly running account bills.
  - 60.1.ii. Engineer shall certify the running account bills within 10 days from the date of submission of bills in complete shape by the Contractor with all required enclosures, attachments etc.
  - 60.1.iii. The Employer shall make payment within 10 days from the date of certification of bills by the Engineer.
  - 60.1.iv. Any other applicable deductions as per Conditions of Contract
  - 60.1.v. Other applicable deductions.

**60.2. Final Bill:**

The Contractor shall submit his final bill for the works within one month of completion of works. The bill shall be based only on works as measured and at accepted agreement rates, including rates for any additional or extra work, which might have been sanctioned by the Employer. All deductions due under the Contract shall be made.

**60.3. FINAL BILL PAYMENT:**

60.3.i. Final bill shall be submitted by the Contractor, within one month from the date of completion of all the works.

60.3.ii. The Employer shall certify the final bill within one month of submission in complete shape with all the required documents, subject to finalisation of extra claims, if any.

60.3.iii. The Employer shall make payment for the final bill within 15 days from the date of certification of final bill by the Employer.

**60.4. DEDUCTION IN FINAL BILL :**

60.4.i. Applicable deductions as per Conditions of Contract.

60.4.ii. Any money recoverable from the Contractor.

60.4.iii. All interim payments effected.

**61.0 DELAYED PAYMENT:**

No interest is payable on Delayed Payments.

**62.0 PAYMENT OF RETENTION MONEY:****62.1. PAYMENT ON ACCOUNT AND RETENTION:**

The Contractor may, at intervals specified in the Tender, submit claims for payment of advances on account of work done and materials delivered at the Site in accordance with the Contract. Such claims which shall be for a net amount not less than the minimum named in the tender shall be computed as under

**62.2. RETENTION AMOUNT:**

In addition to the Performance Bond/Performance Guarantee in the form of Bank Guarantee as required, as a further security for the due fulfilment of the contract by the Contractor, 10% of the value of the work done will be deducted by the Employer from each payment to be made to the Contractor until the retention money amounts to a maximum of 5% of the contract sum of the work.

Upon the Engineer's certificate of completion of the works, 50% of the retention money

would be refunded and the balance after due completion of all obligations under the contract agreement and defects liability period. The amounts retained by the Employer shall not bear interest.

### **63.0 SECURED ADVANCE ON MATERIAL AT SITE:**

Secured Advance against material delivered at site is not payable.

### **64.0 FINAL MEASUREMENTS AND PAYMENTS**

- 64.1. Soon after the issue of the Completion Certificate, as per Clause 83 and 85 the Engineer shall have the final measurements taken, recorded and signed, as in the case of interim measurements referred to in Clause 76.0. A joint account of any plant, equipment and materials issued by the Employer to the Contractor, shall also be prepared and signed jointly. Based on the final measurements and joint material and plant, equipment account statements, the Contractor shall submit a draft Final bill with supporting documentation in the Proforma prescribed by the Engineer. Within four months of receipt of the draft Final bill and of all information reasonably required for its verification, the Engineer shall determine the value of all matters to which the Contractor is entitled under the Contract, and issue his draft Final bill account to the Employer and the Contractor. The Contractor shall sign the Engineer's copy of the draft Final Bill Account in token of acknowledgement of the full and final value of the Works performed under the Contract, and based on that, submit promptly the Final Bill duly signed by him in the format desired by the Engineer, together with a "No Claim" certificate or a list of any unsettled claims in accordance with Clause. On receipt of the Final Bills, the Engineer shall promptly prepare and issue to the Employer the Certificate of Final Payment, confirming the amount due to the Contractor under the Contract. The Employer, shall, on receipt of the Certificate, arrange to make payment, subject always to any deductions under these presents, due to the Contractor, within a period of 60 days failing and after which the Employer shall be liable to pay interest at 10% per annum which shall be compounded every 3 months. Provided always, that, no interest shall be payable on any amount disallowed or disputed by the Engineer or the Employer, even if such amount is later on determined to be payable to the Contractor, as a result of any process resorted to for the settlement of the dispute as per Conditions of Contract.
- 64.2. In respect of both on-account Bills and final Bill, purely as a matter of convenience and to help expedite the work, the Engineer may ask the Contractor to furnish the details in a computer disc also, prepared using a mutually agreed software package, and the Contractor shall supply the same. The computer disc shall not replace the written and signed bills and other documents to be submitted by the Contractor

### **65.0 ROUND OFF**

In calculating the amount each item due to the Contractor, in every certificate prepared for payment, sums of less than fifty paise shall be omitted and sums of fifty paise and more up to one rupee shall be reckoned as one rupee.

### **66.0 PAYMENT, TAX DEDUCTION AT SOURCE AND SALES TAX ON WORKS CONTRACTS**

- 66.1. **Payment by NEFT / RTG:** Unless otherwise specified all payments to the Contractor shall be made by NEFT / RTG / Cheque, but no Cheque will be issued for an amount



less than Rs.1000/-. This stipulation, however, shall not apply to Final Invoices.

- 66.2. **Tax Deduction at Source:** Where there is a statutory requirement for Tax deduction at source, such deduction towards Income Tax and other Taxes as applicable will be made from the invoices payable to the Contractor at rates as notified from time to time.
- 66.3. **Sales Tax on Works Contracts:** Sales Tax on works contract shall be borne by the Contractor and will be deemed to have been built by him in the Contract Price. It will not be reimbursed by the Employer.

## 67.0 COMPLETION CERTIFICATE

- 67.1. **Time of Completion:** Subject to any provision in the Contract as to completion of any section of the Works before completion of the whole, the whole of the Works shall be completed in accordance with Clause hereof, within the time limit stated in the "Instructions to Tenderers" or such extended time as may be allowed under Clause hereof.
- 67.2. **Notice by Contractor regarding completion of work:** As soon as the work is completed, the Contractor shall give notice of such completion, whether of the whole of the Works, or of any part of the work, for which a separate date of completion is stipulated in the Contract, to the Engineer, and the Engineer, within 30 days of receipt of such notice, shall inspect the work and also arrange for carrying out of such tests as may be prescribed under the Contract. If the Engineer notices any incomplete item of work or any defect which is to be rectified by the Contractor, or if any part of or whole of the work fails to pass the specified tests, the Engineer shall furnish to the Contractor, the list of all such incomplete items of work, deficiencies, defects failure to pass tests, etc., and may refuse to issue a Certificate of Completion to the Contractor. Provided, however, that such certificate shall not be refused only on grounds of any minor defect in the work, required to be rectified by the Contractor in respect of Contracts wherein a specific defect liability period (maintenance period) is provided for. If in the opinion of the Engineer, the work shall have been satisfactorily completed and shall have satisfactorily passed final test or tests that may be prescribed, the Engineer shall issue a Certificate of Completion, showing the date of completion in respect of Work and the defect liability period if any (i.e. the maintenance period), shall commence from the date of such certificate provided that the Engineer may issue such a certificate with respect to any part of the Works, before the completion of the whole of the Works or with respect to any specific substantial part of the work which has been so completed and / or used by the Employer. When any such certificate is given in respect of a part of the work, such part shall be considered as completed and the defect liability period (Maintenance period) of such part, shall commence from the date of such certificate.
- 67.3. **Completion Certificate not to Absolve:** The Certificate of Completion of works referred to in Sub-clause shall not absolve the Contractor from his liability to make good defects, imperfections and shrinkages or faults, which may appear during the defect liability period (period of maintenance) specified in the Contract, arising in the opinion of the Engineer from materials or workmanship being not in accordance with Drawings or Specifications or instructions of the Engineer. These shall be amended and made good by the Contractor at his own cost. In case of default on the part of the Contractor,

to so make good the defects or deficiencies, the Engineer may employ labour, plant and machinery and materials or appoint another agency or Contractor, to amend and make good such defects, imperfections, shrinkages and faults, and all expenses consequent thereto and incidental thereto, shall be borne by the Contractor and shall be recoverable from any moneys due to the Contractor under the Contract including the Performance Guarantee amount or from any moneys payable to the Contractor by the Employer, under any other Contract, or as a debt due.

#### 68.0 POST PAYMENT AUDIT

It is an agreed term of the Contract, that the Employer reserves to himself the right to carry out a post payment audit and / or technical examination of the Works, and the Final bill including all supporting vouchers, abstracts, etc., and to make a claim on the Contractor for the refund of any excess amount paid to him, if as a result of such examination, any over-payment to him is noticed to have been made in respect of any work done or claimed to have been done by the Contractor, under the contract. If any under-payment is noticed, the same shall be paid by the Employer to the Contractor. Such payments or recoveries, however, shall not carry any interest.

#### 69.0 MAINTENANCE CERTIFICATE

- 69.1. **Definition of 'Period of Maintenance':** In the Contract, the expression "Maintenance Period" or "Period of Maintenance", shall mean the period of maintenance calculated from the date of completion of the Works, as certified by the Engineer or, in the event of more than one certificate having been issued by the Engineer under the said Clause, from the respective dates so certified and in relation to the Period of Maintenance the expression "the Works" shall be construed accordingly.
- 69.2. **Completion Certificate:** The Contract shall not be considered as completed, until a Completion Certificate shall have been signed by the Engineer stating that the Works have been completed and maintained to his satisfaction. Maintenance Certificate shall be issued by the Engineer, upon expiration of Maintenance Period (Period of Maintenance), or as soon thereafter as any works ordered during such period pursuant to Clause 66.0 of these conditions, shall have been completed to the satisfaction of the Engineer and full effect shall be given to this clause, notwithstanding the taking possession of or using the Works or any part thereof by the Employer.
- 69.3. **Final Approval by Maintenance Certificate:** No certificate other than 'Maintenance Certificate', shall be deemed to constitute final approval of any work or other matter, in respect of which it is issued, or shall be taken as an admission of due performance of the Contract or any part thereto, or of the accuracy of any claim or demand made by the Contractor, or of additional or waived work having been ordered by the Engineer, nor shall any other certificate concluded or prejudice any of the powers of the Engineer or the Employer.
- 69.4. **Cessation of Employer's Liability:** The Employer shall not be liable to the Contractor for any matter, arising out of or in connection with the Contract, or the execution of the Works, unless the Contractor shall have made a claim in writing in respect thereof within 60 days from the date of completion of the Works.
- 69.5. **Unfulfilled obligations:** Notwithstanding the issue of Maintenance Certificate, the

Contractor and the Employer, shall remain liable for the fulfillment of any obligation incurred under the provision of the Contract, prior to the issue of the Maintenance Certificate, which remain unperformed at the time such certificate is issued, and for the purpose of determination of the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the parties hereto.

#### **70.0 PRODUCTION OF VOUCHERS**

- 70.1. The Contractor shall, whenever required by the Engineer, produce or cause to be produced for examination by the Engineer, any quotation, invoice, cost or other account books, vouchers, receipts, letters, memoranda or any copy of or extract from any such documents and also furnish information and returns, as may be required, relating to the execution of this Contract or relevant for verifying or ascertaining the cost of execution of this Contract or ascertaining the materials supplied by the Contractor are in accordance with the specifications laid down in the Contract. The Engineer's decision on the question of relevancy of any documents, information or returns shall be final and binding on the parties.
- 70.2. If any part or item of the work is allowed to be carried out by a sub-contractor, assignee or any subsidiary or allied firm, the Engineer shall have power to secure the books of such sub-contractor, assignee or any subsidiary or allied firm through the Contractor, and shall have power to examine and inspect the same. The above obligations are without prejudice to the obligations of the Contractor under any statute, rules or orders.

#### **71.0 WITHHOLDING AND LIEN FOR SUMS CLAIMED**

- 71.1. The Employer shall have lien over all or any moneys that may become due and payable to the Contractor under these presents, and / or over the deposit of Performance Guarantee or other amount or amounts made under the Contract and which may become payable to the Contractor, under the condition in that behalf herein contained, in respect of any debt or sum that may become due and payable to the Employer by the Contractor, either alone or joint with others, either under this or under any other Contract or transaction of any nature whatsoever between the Employer and the Contractor.
- 71.2. And further, unless the Contractor pays and clears immediately on demand any claim of the Employer, the Employer shall at all times be entitled to deduct the amount of the said claim from the moneys, securities and / or deposits which may have become or will become payable to the Contractor under these presents, or under any other Contract or transaction whatsoever between the Employer and the Contractor even if the matter stands referred to Arbitration. Provided further that if the Contractor does not accept any such claim, the amount deducted shall be treated as having been withheld only till the claim is mutually settled or determined by the Arbitrator or by the competent court of law. The Contractor shall have no claim for any interest or damages whatsoever in respect of any amounts withheld or treated as withheld under the lien referred to above and duly notified as such to the Contractor.

#### **72.0 SIGNATURE ON RECEIPTS FOR PAYMENTS**

Every receipt of payment which may become payable, or for any Performance Guarantee amount which may become returnable to the Contractor, under this Contract, shall, if signed in the partnership name by anyone of the partners of a Contractor firm, or by a person holding a power of attorney, if the Contractor is a limited (private / public) company, be a good and sufficient discharge to the Employer in respect of moneys or security amount purported to be acknowledged thereby. In the event of death of any of the Contractor's partners during the currency of the Contract, it is hereby expressly agreed that every receipt by any one of surviving Contractor's partners, shall, if so signed as aforesaid, be a good and sufficient discharge as aforesaid, provided that nothing in this Clause shall be deemed to prejudice or affect any claim, which the Employer may hereafter have against the legal representatives of any Contractor's partner so dying, for or in respect of breach of any of the conditions of the Contract. Provided also that nothing contained in this clause shall be deemed to prejudice or affect the respective rights and obligations of the Contractor's partners, or of the legal heirs/representatives of any deceased contractor/partner interests.

### **73.0 FORCE MAJEURE**

If, at any time during the currency of the Contract, the performance in whole or in part by either party of any obligation under this Contract shall be prevented or delayed by reasons of any war, hostilities, invasion, acts of public or foreign enemies, rebellion, revolution, insurrection, civil commotion, sabotage, large scale arson, floods once in 50 year cycle, earthquake, large scale epidemics, nuclear accidents, any other catastrophic unforeseeable circumstances, quarantine restrictions, any statutory rules, regulations, orders or requisitions issued by a Government department or competent authority or acts of God (hereinafter referred to as "event") then, provided notice of the happening of such an event as given by either party to the other within 21 days of the occurrence thereof.

- 73.1. Neither party shall be reason of such event be entitled to terminate the Contract or have claim for damages against the other in respect of such non-performance or delay in performance.
- 73.2. The obligation under the Contract shall be resumed as soon as practicable after the event has come to an end or ceased to exist.
- 73.3. If the performance in whole or part of any obligation under the Contract is prevented or delayed by reason of the event beyond a period mutually agreed to if any, or 90 days, whichever is more, either party may at its option terminate the Contract.
- 73.4. In case of doubt or dispute, whether a particular occurrence should be considered an "event" as defined under this clause, the decision of the Engineer shall be final and binding.
- 73.5. Works that have already been measured shall be paid for by the Employer even if the same is subsequently destroyed or damaged as a result of the event. The cost of rebuilding or replacing any work that has been measured, shall be borne by the Employer.
- 73.6. If the Contract is terminated under this Clause, the Contractor shall be paid fully for the work done under the Contract, but not for any defective work or work done which has

been destroyed or damaged before its measurement. The Employer shall have the option to take over any plant and material lying at site, at rates provided for in the Contract, failing that, as per rates which are determined to be fair and reasonable by the Engineer.

- 73.7. If neither party issues notice regarding the event within 21 days of its occurrence, the said event shall be deemed not have occurred and the Contract will continue to have effect as such.

#### **74.0 SETTLEMENT OF DISPUTES AND ARBITRATION**

- 74.1. **Dispute to be referred to and settled by Engineer at the first place:** Should any dispute or difference of any kind whatsoever arise between the Employer and the Contractor, touching, in connection with, or arising out of the Contract, or subject matter thereof, or the execution of Works, whether, during the progress of Works or after their completion and whether before or after termination, abandonment or breach of Contract, it should, in the first place, be referred to and settled by the serving CMRL officer, not below the rank of General Manager who will be appointed by the Managing Director and who has not dealt with the case and who shall, within a period of sixty days after being requested in writing by either party to do so, give written notice of his decision to the Employer and the Contractor. The Engineer while considering the matters of dispute referred to him, shall be competent to call for any records, vouchers, information and enforce the attendance of the parties either in person or through authorised representatives, to sort out or clarify any issue, resolve the differences and to assist him to decide the matters referred to him. Subject to arbitration, as hereinafter provided, such decision in respect of every matter so referred shall be final and binding upon the Employer and the Contractor and shall forthwith be given effect to by the Employer and by the Contractor, who shall proceed with the execution of Works with all due diligence irrespective of whether any of the parties goes in or desires to go in for arbitration. If the Engineer has given written notice of his decision to the Employer and the Contractor and no intimation of reference of any claim to arbitration has been sent to him by either the Employer or the Contractor within a period of sixty days from receipt of such notice, the said decision of the Engineer shall remain final and binding upon the Employer and the Contractor and the same shall be deemed to have been accepted by them. The Employer or the Contractor shall not seek any arbitration thereafter.
- 74.2. **Referring of dispute for arbitration:** If the Engineer shall fail to give notice of his decision, as aforesaid, within a period of sixty days after being requested as aforesaid or if either the Employer or the Contractor be dissatisfied with any such decision of the Engineer, only then shall the matter in dispute be referred to arbitration as herein provided.
- 74.3. **Dispute due for arbitration:** Disputes or differences shall be due for arbitration only if all the conditions in Sub clause 90.1 is fulfilled.
- 74.4. **Settlement of disputes:** Except where otherwise provided in the Contract, all disputes or differences, whatsoever arising between the parties, arising out of contract or relating to construction, operation or effect of the Contract or the breach thereof, shall be settled by arbitration as detailed in Sub Clause 90.5.

- 74.5. **Nomination of Arbitrators/Sole Arbitrator:** Matters to be arbitrated upon shall be referred to a sole Arbitrator where the total value of claims does not exceed Rs.16,00,000/- (Sixteen lakhs only) . Beyond the claim limit of Rs.16,00,000/- (Sixteen lakhs only), there shall be three arbitrators. For this purpose the Employer will make out a panel of Engineers with the requisite qualifications and professional experience relevant to the field to which the Contract relates. This panel will be from serving or retired Engineers of Government departments or of Public sector. In case of a single arbitrator, the Panel will be of three Engineers, out of which the Contractor will choose one. In case three arbitrators are to be appointed, the Employer will make out a panel of five. The Contractor and the Employer will choose one arbitrator each and the two so chosen will choose the third arbitrator. Neither party shall be limited in the proceedings before such arbitrator/s to the evidence nor arguments put before the Engineer for the purpose of obtaining his decision. No decision given by the Engineer in accordance with the foregoing provisions shall disqualify him from being called as a witness and giving evidence before the arbitrator/s on any matter, whatsoever, relevant to dispute or difference referred to arbitrator/s. The arbitration proceedings shall be held in Chennai only. The language of proceedings, that of documents and communication shall be English and the awards shall be made in writing. The arbitrators shall always give item-wise and reasoned awards in all cases where the value of total claims exceeds Rs.5,00,000/- (Five lakhs only) . Where three arbitrators have been appointed, the award by the majority will prevail.

The reference to arbitration shall proceed notwithstanding that Works shall not then be or be claimed to be complete, provided always that the obligations of the Employer, the Engineer and the Contractor shall not be altered by reasons of arbitration being conducted during the progress of Works. Neither party shall be entitled to suspend the work to which the dispute relates on account of arbitration and payments to the Contractor shall continue to be made in terms of the Contract.

- 74.6. **Award to be binding on all parties:** The award of the sole arbitrator or a bench of three arbitrators shall be binding on all parties.
- 74.7. **Rules governing the arbitration proceedings:** The arbitration proceedings shall be governed by Indian Arbitration and Conciliation Act, 1996, as amended from time to time including provisions in force at the time the reference is made.
- 74.8. **Limitation of time:** No dispute or difference shall be referred to Arbitration after expiry of 60 days from the date of decision by the Engineer, if notified, or from the date when the Engineer ought to have given his decision in terms of provisions under Sub-clause 90.1 in case of failure on the part of the Engineer to give notice of decision.

74.8.i. **Payment of Interest**

Where the arbitral award is for payment of money, no interest shall be payable on whole or any part of the money for any period till the date on which the award is made.

74.8.ii. **Cost of Arbitration**

The cost of arbitration shall be shared by both the parties equally. Members of the Arbitration tribunal shall be paid Rs 15,000/- (Rupees Fifteen thousand only)

per day or part thereof.

## 75.0 NOTICES

- 75.1. **Notice to Contractor:** All certificates, notices, written orders or letters, to be given by the Employer or the Engineer to the Contractor, shall be deemed to have been served, if the same are delivered to the Contractor or his authorised agent, or delivered or left at or posted to the given address of the Contractor or Contractor's agent or Contractor's Registered Office or principal place of business. Such documents shall be deemed to have been received on the day they are left or delivered, or in the case of postal transmission, on the day they would ordinarily have reached but not exceeding 7 days from the date of posting inclusive of day of posting, in any case. The Contractor shall, on award of the Contract, furnish to the Engineer, the name, designation, address and telephone, telex and telefax numbers of his agent
- 75.2. **Notice to Employer and Engineer:** All notices to be given to the Employer or to the Engineer, under the terms of the Contract, shall be served by sending by post or telex or telefax, or by delivering the same, to the respective addressees nominated for this purpose.
- 75.3. **Change of Address:** Either party may change the nominated address by prior written notice to the other party, and the Engineer may do so by prior written notice to both the parties, viz. The Employer and the Contractor.
- 75.4. **Change in Constitution of Firm:** In case the Contractor is a partnership firm, any change in the constitution of the firm shall forthwith be notified by the Contractor to the Engineer as also to the Employer.

**APPENDIX - 1**  
**Proforma of Bank Guarantee for Earnest Money Deposit**

Whereas, ..... (hereinafter called “the Tenderer”) has submitted its tender dated, ----- for the “Interior works such as wardrobe and kitchen for the staff quarters at CMRL depot, Koyambedu, Chennai 600107” TAMILNADU” hereinafter called “the tender”.

KNOW ALL MEN, by these presents, that we, ....., having our registered office at, . . . . . (hereinafter called “the Bank”), are bound unto, the The Joint General Manager (Design), Chennai Metro Rail Ltd, Admin Building, CMRL Depot, Poonamallee high Road, Koyambedu - Chennai - 600107 (hereinafter called the “Employer”), in the sum of INR..... (Indian Rupees..... only), for which, payment, well and truly to be made, to the said “Employer, the Bank binds itself, its successors, and assigns by these presents.

Sealed with common seal of the said Bank, this ..... day of ..... 2015.

The Conditions of the obligation are :

- a) if the Tenderer , withdraws his tender, during the period of tender validity.
- b) If the Tenderer fails to accept the corrections of his errors in the tender documents as determined by the “Employer”
- c) If the Tenderer having been notified of the acceptance of his tender by the “Employer” during the period of validity of tender :
  - i) Fails or refuses to execute the Form of Agreement.
  - ii) Fails or refuses or neglects to furnish the Performance Bank Guarantee.

We undertake to pay to the “Employer”, the above amount, upon receipt of his, first written demand, without the “Employer, having to substantiate his demand, provided that in his demand the “Employer“, will note, that the amount claimed by him, is due to him, owing to the occurrence of any of the above conditions, specifying the occurred condition or conditions.

Signature of the Bank

Signature of Witness

Name of Witness

Address





## APPENDIX- 2

**FORM OF PERFORMANCE GUARANTEE**

1. In consideration of the Chennai Metro Rail Ltd, Admin Building, CMRL Depot, Poonamallee high Road, Koyambedu - Chennai - 600107 **Tamil Nadu, India**,. (hereinafter, called "Employer" having agreed to allow M/s. .... (hereinafter called, "the said **Contractor(s)**") from the demand under the terms and conditions of an Agreement No. ...., for the work of "**Interior works such as wardrobe and kitchen for the staff quarters at CMRL depot, Koyambedu, Chennai 600107**", (hereinafter called "the said Agreement" for furnishing Performance Bond for the due fulfillment, by the said **Contractor(s)** of the terms and conditions in the said Agreement, by production of a BANK GUARANTEE for INR.. .... ( Indian Rupees.. .... only). We, the .... (Name of the Bank) having our Head Office at ,..... and having branch at,..... referred to as "the Bank" at the request of M/s. .... **Contractor(S)**, do hereby undertake to pay to the **Employer** an amount not exceeding INR...., on demand by the **Employer**.

2. We, .... (Name of the Bank) .... Branch, do hereby undertake to pay the amounts due, and payable under this guarantee without any demur, merely on a demand from the **Employer**, stating that the amount claimed is required to meet the recoveries due or likely to be due, from the said **Contractor(s)**. Any such demand made on the Bank shall be conclusive as regards the amount due, and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding, INR.... ( Indian Rupees.. .... only).

3. We undertake to pay to the Employer the amount due under this Guarantee so demanded, notwithstanding any dispute or disputes raised by the **Contractor(s)**, in any suit or proceeding pending before any Court, or Tribunal, relating thereto, our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder.

4. We , .... (Name of the Bank) .... Branch, further agree, that the guarantee herein contained shall remain in full force and effect during the period, that would be taken for the performance of the said agreement, and that it shall continue, to be enforceable till the dues of under or by virtue of, the said agreement have been fully paid and its claims satisfied or discharged ,or till the Engineer in charge on behalf of the **Employer** certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said **Contractor(s)** accordingly discharges this guarantee.

5. We, . . . . . (Name of the Bank) . . . . . , Branch, further agree with the **Employer**, that the **Employer**, shall have the fullest liberty, without our consent and without affecting in any manner ,our obligations hereunder, to vary any of the terms, and conditions, of the said Agreement ,or to extend time of performance, by the said **Contractor(s)**, from time to time, or to postpone, for any time, or from time to time, any of the powers exercisable, by the **Employer** ,against the said **Contractor(s)**, and to forbear or enforce, any of the terms and conditions, relating to the said agreement, and we shall not be relieved, from our liability, by reason of any such variation or extension of time being granted to the said **Contractor(s)**, or for any forbearance act or omission, on the part of **Employer** or any indulgence by the **Employer** to the said **Contractor(s)**, or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision have effect of so relieving us.

6. This guarantee will not be discharged, due to the change in the constitution of the Bank or the **Contractor(s)**.

7. We hereby waive the necessity of your demanding, the **Contractor**, before presenting us, with the demand.

8. We, . . . . . (Name of the Bank) . . . . . Branch , lastly undertake not to revoke this guarantee except with the previous consent, of the **Employer** in writing.

9. This guarantee shall be valid upto . . . . . , not –withstanding, anything contained hereinbefore , our liability against this guarantee, is restricted to INR. . . . . ( Indian Rupees..... only) ,and it will remain in force till . . . . . ) ,unless, a claim or demand in writing is made against us under this guarantee before the aforesaid date that is before . . . . . of . . . . . ( . . . . . ) ,all your rights under the said guarantee shall be forfeited and, we shall be relieved and discharged from all liability hereunder.

Dated the            day of            .....            for (Name of the Bank)  
Branch.

**APPENDIX 3 - SPECIAL CONDITIONS ON SAFETY**

Additional Special Conditions on safety in handling equipment and materials during execution of work

1. Contractor to provide required supervisor for every Building
2. All Employees of the Contractor shall wear badge showing name, profession, date of training, work order no., work description, valid from and to dates, name of the Contractor, name of supervisor.
3. Welding transformer, if any brought to the site, shall have a valid test certificate
4. Contractor should provide detailed plan of material handling during time of contract. Material - manual handling shall conform to State Regulations.
5. Pre-commissioning test report shall be provided for all electrical systems. Including cables, wire, motors, transformers, voltage stabilizers.
6. All rotating and moving parts with a nip must be guarded, such that even a little finger cannot come in contact with any moving part.
7. Section 32 of the Factory Act regarding ladders, platforms/stairs and scaffolding to be followed strictly. (For e.g. Ladders should have uniform step height of not over 300mm. All fixed ladders to have railings at a height of 910-1050mm. Ladders over 3m height to be roped.)
8. All portable ladders shall be of Aluminum with rubber shoes and flat treads as per IS3696 part 2 (1991) except where these could come in contact with live electrical. In such situations, only carbon fiber or insulated ladders to be used. Wooden and Bamboo ladders are not to be used. Portable ladders to be stored in a place where it is easily accessible.
9. All platforms, walkways to have toe-boards of 100 to 150mm and hand rails at a height of 910mm to 1150mm. A spring return bar gate to be provided at every access to the ladder.
10. All scaffolds to be of metallic construction and conform to IS2750-1964. Safe access by means of stairway to be provided if the height is more than 4m. Working platform with handrails at a height of 910mm to 1150mm and toe boards of 100-150mm to be provided.
11. Methods statement to be produced for all high risk activities (including risk assessment of critical activities). Approximate PPE usage for all critical activities to be compiled with.
12. Lifting gears, tools and tackles and equipment like cranes shall conform to requirements of section 28 and 29 of the Factory Act.
13. Noise level at 1 Mtr. distance from the equipment should not exceed the level indicated elsewhere in the specification.

Any further clarification on Environment, Health and Safety guidelines can be sought from unit, Environment Health and Safety Manager and Employer's guidelines on EHS.

**14     Safety Code and Safety Rules:**

First aid appliances, including adequate supply of sterilized dressings, and cotton wool, shall be maintained in a readily accessible place.

An injured person shall be taken to a Public Hospital, without loss of time, in cases, where the injury necessitates hospitalization.

Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from ground.

No portable single ladder shall be over 8 meters in length. The width between the side rails, shall not be, less than 30 cm. (clear) and the distance between two adjacent rungs shall not be more than 30cm. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder.

The excavation material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of trench, whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.

Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing, whose minimum height shall be one metre.

No floor, roof or other part of the structure shall be so overloaded with debris or materials, as to render it unsafe.

Workers employed on mixing and handling material, such as asphalt, cement mortar or concrete, and lime mortar, shall be provided with protective foot wear and rubber hand-gloves.

Those engaged in welding works, should be provided with welder's protective eye-shields and gloves. All persons at site shall wear shoes and protective safety helmets approved for construction sites.

No paint containing lead or lead products shall be used except in the form of paste or readymade paint.

Suitable facemasks should be supplied for use by the workers when the paint is applied in the form of spray or when the surface having lead paint is dry rubbed and scrapped.

Overalls shall be supplied by the Contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during the period of cessation of work.

Hoisting machines and tackle used in the works including their attachments, anchorage and supports, shall be in perfect condition.

The ropes used in hoisting or lowering material or as a means of suspension, shall be of durable quality and adequate strength and free from defects.

**15     SAFETY RULES TO BE FOLLOWED BY THE CONTRACTOR DURING EXECUTION OF WORK:**

1. All the staff working at site will wear helmets.
2. All electrical equipment used by the Contractor will have double earthing, and will be connected through an ELCB.
3. No temporary electrical connections with loose wire will be permitted. For all electrical connections proper sockets and plugs will be used and wiring / cabling clamped.
4. Electrical hand tools, like drilling machine will be of 220 volts type.
5. ELCB's will be used, wherever power & electrical connections are taken by the Contractor.
6. Fire fighting portable extinguishers will be used and located at appropriate locations.
7. All staff working at heights will use safety belts and standard platforms, with one metre height railing.
8. All the staff working in the site shall wear shoes.
9. All electricians will have wiremen's license.
10. Standard ladders only will have to be used, and non-standard ladders will not be permitted.
11. Inflammable materials like Petrol, Kerosene, Wax etc., will not be allowed to be stored at site stores. Special storage space with fire protection arrangements, will have to be provided to store such materials.
12. Each Contractor will keep a well furnished FIRST AID box, with easy accessibility. Respiratory protective equipment should be available with the Contractor.
13. Welding mechanics and electricians will wear rubber gloves.
14. Personal protecting equipment like Ear Muffler, Goggles, Gloves, Safety Belt, Safety Helmet, Rubber Shoes, etc., should be used, wherever necessary, and available in Contractor's stores.
15. Use of asbestos shall be prohibited.
16. If correct manual handling is not used, it can result in back injuries. Therefore all workers should be trained in safe manual handling. Special objects require special handling.
17. All scaffolding will be of steel and double stage.
18. The Contractor has to ensure, that all equipment and tools, brought on to the premises, will be in a safe condition, which should have recently been checked, and that all personnel using the equipment and tools have been trained in their safe use.

19. The Contractor has to ensure that whilst on site premises, he will comply with all health and safety regulations, as required by the Employer.
20. All the platforms, scaffolding and catwalks should have railings of 1 Mt. height and 100 mm toe board. All the catwalks should be minimum 450 mm wide and of grill type. All ladders should have hand rails.
21. **HAND BOOK ON HEALTH AND SAFETY AT WORK :**

The Contractor while carrying out the Project shall follow the guide lines given in the hand book on health and safety at work appended herewith **Technical Specification** during execution.

**CHENNAI METRO RAIL LIMITED****(A JOINT VENTURE OF GOVERNMENT OF INDIA AND GOVERNMENT OF TAMILNADU)****TECHNO COMMERCIAL TENDER  
TWO COVER SYSTEM****INTERIOR WORKS SUCH AS WARDROBE AND KITCHEN FOR THE  
STAFF QUARTERS AT CMRL DEPOT, KOYAMBEDU, CHENNAI  
600107  
Cover – A****Technical Bid****PART - 1B: TECHNICAL SPECIFICATION****DATE OF SUBMISSION OF TENDER - 19-06-2017 UP TO 14.00 Hours****DATE OF OPENING OF TENDER - 19-06-2017 UP TO at 14.30 Hours****TO BE SUBMITTED TO:****The JOINT GENERAL MANAGER (DESIGN)  
Chennai Metro Rail Limited  
Admin. Building, CMRL Depot  
Poonnamallee High Road ,  
Koyambedu, Chennai - 600107****TENDER SUBMITTED BY:****M/s.** \_\_\_\_\_**Address** \_\_\_\_\_

\_\_\_\_\_



TECHNICAL SPECIFICATIONS  
FOR  
INTERIOR WORKS

## GENERAL SPECIFICATION

### 1.00 GENERAL

These specifications are intended for general description of quality and workmanship of materials and finished work. They are not intended to cover minute details. The work shall be executed in accordance with best modern practices.

These specifications shall have precedence in case anything contrary to this is stated anywhere in this document. The Employer's /Architect's's decision shall be final on any issues arising out of such discrepancies.

These specifications shall be read in conjunction with the particular specifications for various items of work the relevant drawings, construction logic, and instructions to the Contractors to ascertain in detail the type and amount of work covered under this scope. The Contractor shall carefully acquaint himself with the general specifications, coordinate the same with any other specifications forming a part of the contract document and determine his contractual obligations or the execution of various items of work in accordance with good engineering practice.

All standards, specifications, code of practice referred to are applicable and shall be considered to be a part of this specification. In case of variation and discrepancy in condition mentioned here, and in particular specifications, the Employer's /Architect's's interpretation and discretion shall govern.

### 2.00 SCOPE OF WORK

The work to be carried out under the Contract shall consist of the various items as generally described in the Tender Documents.

**The works to be performed shall also include all general works preparatory to the construction of wardrobe at Bed room, Kitchen cabinets all other related works at all seven units in each level.** The work shall include work of any kind necessary for the due and satisfactory construction, completion and maintenance of the works to the intent and meaning of the drawings and these specifications and further drawings and orders that may be issued by the Employer's /Architect's from time to time. The scope of work shall include compliance by the Contractor with all General Conditions of Contract, whether specifically mentioned or not in the various clauses of these specifications, all materials, apparatus, plant, equipment, tools, fuel, water, strutting, timbering, transport, offices, stores, workshop, staff, labour and the provision of proper and sufficient protective works, diversions, temporary fencing lighting. It shall also include safety of workers, first-aid equipment, suitable accommodation for the staff and workmen, with adequate sanitary arrangements, the effecting on maintenance of all insurances, the payment of all wages, salaries, fees, royalties, duties or other charges arising out of the erection of works and the regular clearance of rubbish, reinstatement and clearing up of the site as may be required on completion of works safety of the public and protection of the works and adjoining land, structures properties etc.

The contractor shall ensure that all actions are taken to build in quality assurance in the planning and execution of works. The quality assurance shall cover all stages of work such as setting out, selection of materials, selection of construction methods, selection of equipment and plant, deployment of personnel and supervisory staff, quality control testing, etc. The work of building in quality assurance shall be deemed to be covered in the scope of the work.

The Contractor shall furnish, at least 15 days in advance, his programme of commencement of item of work, the method of working he intends to adopt for various items of work. He shall provide information regarding the details of the method of working, and equipment he proposes to employ and satisfy the Employer's /Architect's about the adequacy and safety of the same. The sole responsibility for the safety and adequacy of the method adopted by the Contractor will, however, rest on the Contractor, irrespective of any approval given by the Employer's /Architect's.

### 3.00 CONTRACT DRAWINGS

The Contract Drawings provided for tendering purposes shall be as contained in the Tender Documents and shall be used as a reference and for guidance only. The Contractor should visualize the nature and type of work contemplated and to ensure that the rates and prices quoted by him in the Bills of Quantities have due consideration of the qualitative and quantitative variations, as may be found at the site and complexities of work involved during actual execution/construction.

The Contract Drawings will also include any other drawings which the Employer's /Architect's may issue from time to time during the currency of the contract.

"Issued for Construction" drawings will be issued to the Contractor during the progress of the work and as further data becomes available to supplement the tender drawings.

"Issued for Construction" drawings will be revised and fresh revised copies issued to the Contractor from time to time by the Employer's /Architect's to adopt the work to the final designs and to suit the physical conditions encountered during the progress of the work. "Issued for Construction" drawings as issued by the Employer's /Architect's shall form part of this specification. Unless otherwise specified, the plans and specifications are intended to include everything obviously requisite and necessary for the proper and entire completion of the work and accordingly the work shall be carried out completeness as required whether each item is mentioned herein or not.

It shall be understood that drawings furnished to the Contractor shall be interpreted by the use of given dimensions, and nomenclature only, and that the drawing shall not be scaled. Figured dimensions on drawings are in all cases to be accepted in preference to scaled sizes and drawings to a large scale shall take precedence over those to smaller scale drawings. In case of discrepancy the Contractor is to ask for clarification before proceeding with the work. All dimensions shall be checked on site prior to execution.

In case of difference between drawings and specifications, the specifications shall govern. Any thing mentioned in the specifications, and not shown on the drawings, or shown on the drawings and not mentioned in specifications, shall be of like effect as if shown or mentioned in both.

Shop drawings consisting of such detailed drawings as are not included in the contract drawings or larger scale details of certain parts of the work indicated on the contract drawings, shall be complete and shall contain all required detailed information as may be reasonably required for satisfactory prosecution of the work.

Prior to submittal for approval, the Contractor shall responsible for thoroughly checking all drawings whether prepared by him or by his sub-contractors to ensure that they comply with the intend and the requirements of the contract specifications, and that they fit in with the overall building layout.

Examination and/or approval by the Employer's /Architect's of any drawing or other drawings or other documents submitted by the Contractor shall not relieve the Contractor of his responsibilities or liabilities under the Contract.

The approval of the drawings by the Employer's /Architect's shall not be construed as a complete dimensional check, but will indicate only that the general method of construction and detailing is satisfactory. Approval of such drawings will not relieve the Contractor of the responsibility for any errors or compliance with requirements of the contract plans and specifications not will any discrepancy between shop drawings and contract plans, and specifications constitute a basis for deviation from the requirements of the contract plans, and specifications. The Contractor shall be responsible for the dimensions and design of adequate connections, supports details and satisfactory construction of the work, any fabrication, erection setting or other work done in advance of the receipt of approved drawings shall be done entirely at the Contractor's risk. Approval of the shop drawings shall not be construed as authorising additional work or increased costs to the Owner. Adjustment in the bid price or any extension of time to cover required

chances in the shop drawings to comply with the requirements of the contract specifications shall not be permitted.

The tendered rates/prices for the work shall be deemed to include the cost of preparation, supply and delivery of all necessary drawings, prints, tracings and negatives which the contractor is required to provide in accordance with the Contract.

## **SITE INFORMATION**

The Contractor shall visit the construction site and examine himself thoroughly the site condition and satisfy himself as to the nature of the existing roads or other means of communications, the character of the soil and the excavations, the extent and magnitude of the work and facilities for obtaining materials and shall obtain generally his own information on all matters affecting the execution of the work. No extra for charges made in consequence of any misunderstanding or incorrect information on any of these points or on the grounds of insufficient description will be allowed. All expenses incurred by the Contractor in connection with obtaining information for submitting this tender including his visits to the site or efforts in compiling the tender shall be borne by the tenderer and no claims for reimbursement thereof shall be entertained.

### **4.00 SETTING OUT**

The Contractor shall set out the works. Owner will provide one permanent mark in the vicinity of the plant for reference. All further laying out work, temporary bench-mark, grid pillars etc. shall be carried out accurately by the Contractor and maintained till the end of the job.

The work of setting out shall be deemed to be a part of general works preparatory to the execution of work and no separate payment shall be made for the same.

### **5.00 MATERIALS**

The relevant standards for materials, as well as the testing procedures, have been indicated at appropriate places in the Specifications.

Materials shall be of approved quality and the best of their kind available and shall generally conform to I. S. Specifications. The Contractor shall order all the materials

required for the execution of work as early as necessary and ensure that such materials are on site well ahead of requirement for use in the work.

All material brought on the site of work by Contractor meant to be used in the same, shall be as per the specification and to the approval of the Employer's /Architect's.

The Contractor shall obtain the Employer's /Architect's approval for samples of all materials to be used in the works and shall deposit these samples with him before placing an order for the materials with suppliers. The materials brought on the works, shall conform in every respect to their approved samples, fresh samples shall be deposited with Employer's /Architect's whenever type or source of any material changes.

The Contractor shall check each fresh consignment of materials as it is brought to the site of works to see that they conform in all respects to the specifications of the samples approved by the Employer's /Architect's, or both

The Employer's /Architect's will have the option to have any of the materials tested to find out whether they are in accordance with the specification and the Contractor will bear all expenses for such testing.

Any materials that have not been found to be conform to the specification will be rejected forthwith and shall be removed from the site by the Contractor at his own cost.

The Employer's /Architect's shall have power to cause the Contractor to purchase and use such materials from any particular source, as may in his opinion be necessary for the proper execution of the work.

**6.00 STORAGE OF MATERIALS**

The Contractor shall store materials in a proper manner to avoid contamination and deterioration, at places at site approved by the Employer's /Architect's and protect from sun, wind, rain or other natural causes. Should the place where material is stored by the Contractor be required by the Owner for any other purpose, the Contractor shall forthwith remove the material from that place at his own cost and clear the place for the use of the Owner.

The Contractor shall make his own arrangement for storing water, if necessary, in drum or tanks or cisterns, to the approval of the Employer's /Architect's. Care shall be exercised to see that water is not contaminated in any way.

**7.00 WORKMANSHIP**

The work involved calls for high standard of workmanship combined with speed and to the entire satisfaction of the Employer's /Architect's.

All works shall be true to level, plumb and square and the corners, edges and arises in all cases shall be unbroken and neat.

Any work not to the satisfaction of the Employer's /Architect's or his representative will be rejected and the same shall be rectified, or removed and replaced with work of the required standard of workmanship at no extra cost.

**8.00 PLANT**

The Contractor will be required to provide and maintain in working order the power driven equipments required during the work.

In addition to the general conditions indicated in the Contract Documents, the following conditions regarding use of equipment in works shall be satisfied:

- a) The Contractor shall be required to give a trial run of the equipment for establishing their capability to achieve the laid down Specifications and tolerances to the satisfaction of the Employer's /Architect's before commencement of the work ;
- b) All equipment provided shall be of proven efficiency and shall be operated and maintained at all times in a manner acceptable to the Employer's /Architect's ;
- c) All the plant/equipment to be deployed on the works shall be got approved from the Employer's /Architect's for ensuring their fitness and efficiency before commencement of work ;
- d) Any material or equipment not meeting the approval of the Employer's /Architect's shall be removed from the site forthwith ;
- e) No equipment will be removed from site without permission of the Employer's /Architect's ; and
- f) The Contractor shall also make available the equipment for site quality control work as directed by the Employer's /Architect's.

**9.00 POLLUTION AND ENVIRONMENTAL PROTECTION**

The Contractor shall take all precautions for safeguarding the environment during the course of the works. He shall abide by all laws, rules and regulations in force governing pollution and environmental protection that are applicable in the area where the works are situated.

The Contractor must take all reasonable steps to minimize dust nuisance during the construction of the works.

#### 10.00 **METHODOLOGY AND SEQUENCE OF WORK**

Prior to start of the construction activities at site, the Contractor shall submit to the Employer's /Architect's for approval, the detailed construction methodology including mechanical equipment proposed to be used, sequence of various activities and schedule from start to end of the project.

#### 11.00 **TESTING OF WORK AND MATERIALS**

The Contractor shall, if required by the Employer's /Architect's, arrange to test materials and / or portions of the works at his own cost in order to prove their soundness and efficiency. If after any such test the work or portion of works is found in the opinion of the Employer's /Architect's to be defective or unsound, the Contractor shall pull down and redo the same at his own cost. Defective materials shall immediately be removed from the site.

#### 12.00 **FIELD LABORATORY**

An adequately equipped field laboratory as required for site control on the quality of materials and the works shall be provided and maintained by the Contractor till the completion of works. The rates quoted for all the items of work shall include for the provision and maintenance of field laboratory.

##### a) **PROTECTION**

The Contractor shall properly cover up and protect all work throughout the duration of work until completion, particularly masonry, arises, mouldings, steps, terrazzo or special floor finishes, , doors and window frames, plaster angles / corners lighting and sanitary fittings, glass, paint work and all finishing.

#### 13. **CLEARING OF SITE**

The Contractor shall after completion of the work clear the site of all debris and left over materials at his own expense to the entire satisfaction of the Employer's /Architect's and Municipal or other public authorities.

#### 14. **PREPARATION OF BUILDING FOR OCCUPATION**

The whole of the work shall be thoroughly inspected by the Contractor and all deficiencies and defects put right. On completion of such inspection, the Contractor shall inform the Employer's /Architect's in writing that he has finished the work and it is ready for the Employer's /Architect's inspection.

On completion, the Contractor shall clean all windows and doors and all glass panes, including cleaning of all floors, staircases and every part of the building including oiling of all hardware. He will leave the entire building neat and clean and ready for immediate occupation and to the satisfaction of the Employer's /Architect's.

#### 15. **RATES**

The items rates/ Lump Sum Price quoted by the Contractor shall, unless otherwise specified, also include compliance with / supply of the following:

- a) General works such as setting out, clearance of site before setting out and clearance of works after completion;

- b) A detailed programme for the construction and completion of the works (using CPM/PERT techniques) giving, in addition to construction activities, detailed network activities for the submission and approval of materials, procurement of critical materials and equipment, fabrication of special products / equipment and their installation and testing, and for all activities of the Owner that are likely to affect the progress of work, etc. including updating of all such activities on the basis of the decisions taken at the periodic site review meetings or as directed by the Employer's /Architect's ;
- c) Samples of various materials proposed to be used on the work for conducting tests thereon as required as per the provisions of the contract;
- d) Any other item of work which is not specifically provided in the Bills of Quantities but which is necessary for complying with the provisions of the contract;
- e) All temporary works, formwork and false work;

All expenses incurred by the Contractor in connection with obtaining information for submitting this tender including his visits to the site or efforts in compiling the tender shall be borne by the tenderer and no claims for reimbursement thereof shall be entertained.

## **MATERIALS**

1. MATERIALS shall be of the best approved quality obtainable and they shall comply to the respective Indian Standard Specification.
2. Samples of all materials shall be got approved before placing order and the approved sample shall be deposited to the Employer's /Architect's site.
3. If directed, materials shall be tested in any approved Testing Laboratory and the Test Certificate in original shall be submitted to the Employer's /Architect's and the entire charges of testing including charges for repeated tests if ordered shall be borne by the Contractor.
4. It shall be obligatory for the Contractor to furnish Certificate, if demanded by the Employer's /Architect's, from manufacturer or the material supplier that the work has been carried out by using their material and as per their recommendation.
5. Any materials supplied by the client or other specialised firms shall be properly stored, and the Contractor shall be responsible for its safe custody until they are required on the works and till the completion of work.
6. Unless otherwise shown on the drawings or mentioned in the Schedule of Quantities or Special Specifications the quality of materials, workmanship, dimensions, etc., shall be as specified here-in-under.
7. All Equipment and facilities for carrying out field tests on materials shall be provided without any extra cost

## WOOD WORK

### 1.00 SCOPE

This specification covers the general requirements for wood work.

### 2.00 GENERAL REQUIREMENTS

- 2.01 The contractor shall furnish all materials, labour, operations, equipment, tools and plants, scaffolding and incidental necessary and required for the completion of all carpentry and joinery work as called for in the drawings and Bill of Quantities.
- 2.02 The carpentry and joinery work shall include the provision of fixing of fastening devices and hardware in accordance with the drawings and attached hardware schedule. Hardware and other materials will be supplied by the contractor after obtaining prior approval of the Employer's /Architect's of samples for each item of hardware.
- 2.03 The Contractor shall strictly follow, at all stages of work, the stipulations contained in the Indian Standard Safety Code and the provisions of the Safety Rules as specified in the General Conditions of the Contract for ensuring safety of men and materials.
- 2.04 Any approval, instructions, permission, checking, review etc. whatsoever by the Employer's /Architect's shall not relieve the Contractor of his responsibility and obligation regarding adequacy, correctness, completeness, safety, strength, workmanship etc.

### 3.00 CODES AND STANDARDS

- 3.01 All standards, specifications, acts, and codes of practice referred to herein shall be the latest editions including all applicable official amendments and revisions.
- 3.02 List of certain important Indian Standards, Acts and Codes applicable to this work is given below. However, the applicable standards and codes shall be as per but not limited to the list given below:

IS: 205 Non-ferrous metal butt hinges

IS: 281 Mild steel sliding door bolts for use with pad locks

IS: 287 Permissible moisture content for timber, used for different purposes

IS: 303 Plywood for general purposes

IS: 848 Synthetic resin adhesives for plywood

IS: 883 Code of practice for design of structural timber in building

IS: 1003 Timber paneled and glazed shutters

IS: 1141 seasoning of timber - Code of practice

IS: 1328 Veneered decorative plywood

IS: 1659 Block boards

IS: 2202 Wooden flush door shutters

IS: 2835 Flat transparent sheet glass



IS: 3087 Wooden particle boards (medium density) for general purposes

IS: 3097 Veneered particle boards

IS: 3809 Fire resistant test for structures

IS: 4021 Timber door, window and ventilator frames

#### 4.00 SAMPLES AND SHOP DRAWINGS

The contractor shall, before proceeding with the work, submit to the Employer's /Architect's for his approval complete samples of the various materials including hardware and fastening devices and shop drawings and large scale details covering all joinery works.

#### 5.00 MATERIALS

##### 5.01 Timber

Timber used shall be of type as stated in the Schedule and of best quality. All timber shall be of natural growth and uniform in texture and shall be well and properly seasoned. It shall be free from large, loose, dead, or cluster of knots, waves, injurious open shakes, borer holes, rot, decay, knots, discolouration, soft or spongy spots, hollow pockets with or centre heart and all other defects and blemishes. Timber shall conform to IS 883.

The seasoning of timber shall be as laid down in IS: 1141.

The boarding for wall lining shall be of BWR plywood with teak veneer, laminate or any other materials as directed fixed on to the frame. The boarding shall be of sizes shown in the drawing or as directed. In case of partitions, the facing materials like plywood with approved teak veneers, or laminate, or any other material as directed shall be fixed.

#### 6.00 INSTALLATION

All timber for joinery work or wrought frame work shall be of best Indian Teakwood unless otherwise specified and of specified quality, carefully selected free from sap and subject to inspection and approved before delivery. All teakwood to be used in this work shall be seasoned in an approved manner.

All workmanship pertaining to wood work shall be of best standard and all joinery work shall fit freely and without wedging or filling and of the kind directed by the Employer's /Architect's. Wood work in frames shall be wrought and all frames joints shall be put together with white lead and pinned with hard wood pins. All exposed faces of joinery shall be thoroughly planed. Jointing shall be by means of mortice and tenon, dovetailed joints or as directed by the Employer's /Architect's.

The joiner work shall be framed and put together immediately but not to be wedged up until required for fixing. The approval of the Employer's /Architect's shall be obtained before any primer coat is applied.

The whole of joinery to be finished to the dimensions and sizes indicated in the drawings are subject to a tolerance to 1.50 mm of each planed face, but no allowance shall be given to flush doors, shutters, ply and other manufactured board etc.

All black boards etc. shall correspond to respective IS specifications. Flush doors shall correspond to relevant IS specifications. Samples of all black board, plywood, flush doors, etc. shall be got approved by the Employer's /Architect's before placing order. All such items shall be of standard manufacture of reputed quality. Unless otherwise specified, all flush shutters shall be teak veneered on both sides. All flush shutters shall be of solid core and shall be provided with teakwood external lipping.

If after execution any shrinkage or bad workmanship is found, the Contractor shall forthwith replace or refix the same at his own cost, all as directed by the Employer's /Architect's.  
Rate quoted shall include for all framing, usual waste and cuttings and no extra rates or claims will be entertained on this account.

The rate for wood work shall include the cost of all sawing, planing, jointing, framing, labour and materials for raising and fixing and all workmanship and fixing and supplying of all strips, bolts, nails, trenails, spikes, keys, wedges, pins, screws etc. necessary for the framing as per specification and drawings. Edges of the beams, joists, posts, frames etc. shall be rounded, moulded or chamfered as directed without extra charges.

The Contractors shall be responsible to deliver all items at site of work. The Contractor will submit a programme of work in such a way that requirements for each floor commencing from ground floor is completed before the requirement of the next floor and arrange to have them fixed in position as the General Builders work progresses.

Timber in contact with masonry or concrete shall be treated with solignum paint or any approved anti-termite treatment before fixing.

The Contractor will be making necessary holes in concrete and masonry for fixing in position and grouting. The Contractor will be responsible for the proper fixing of partitions true to plumb and alignment until completion and grouting pockets with cement concrete and make good affected portions without claim to any extra.

The iron monger fittings shall be of heavy type cast brass oxidized and of approved manufacture. Samples of all iron monger items shall be got approved by the Employer's /Architect's prior to procurement.

## **7.00    **HARDWARE FITTINGS****

All hardware fittings and fixtures shall be made with structural properties to sustain safety and withstand strains and stresses to which they are normally subjected to such as opening and closing, wind pressure etc. The fittings shall generally conform to relevant specifications.

They shall be made true, clean, straight, with sharply defined profiles and unless otherwise shown or specified, with true smooth surfaces and edges, free from defects, screw holes shall be counter sunk to suit the head of wood screws.

The metal shall be treated with finish as specified in the Bill of Quantities.

### **7.01    **Butt Hinges****

These shall be heavy duty brass hinges treated with finish as specified in the Bill of Quantities.

M.S. Butt Hinges shall conform generally to the latest version of I.S.205.

M.S Butt hinges shall be manufactured from M.S sheets of approved gauges. Hinges shall be finished as specified in the respective items. The size of butt hinges shall be taken as length of the hinge.

### **7.02    **Aldrops****

These shall be of anodized aluminium or as specified and shall be capable of smooth sliding action. Aldrops shall be finished as specified and shall conform generally to the latest version of I.S.281.

In case of single leaf door, hole of suitable size shall be made in the door frame and a plate cut to shape shall be fixed at the face of the hole. The size of drops shall be taken as the length of the rod.

**7.03 Sliding bolts/Latches**

These shall be of M.S. Brass or as specified in the BOQ and shall be capable of smooth sliding action. These shall be finished as specified. The size of latch shall be taken as the length of the bolt catch.

**7.04 Tower Bolts**

These shall be as specified viz., anodized aluminium tower bolts from external section.

In the case of brass and aluminium tower bolts, steel spring and ball shall be provided between the sheet and the barrel.

The size of tower bolts shall be taken as the length of barrel without top socket. The bolt shall be finished as specified.

**7.05 Handles**

These shall be as described in the Bill of Quantities and finished as specified.

**7.06 Door Closer**

These shall be of approved quality as per make of materials and as specified in the schedule of quantities.

**8.00 PRESERVATIVE TREATMENT**

All wood work in contact with masonry shall be painted with approved asphalt or bitumen paint before placing. Care shall be taken to keep exposed faces clear from tar, etc. Tar felt shall be used to isolate wood from masonry wherever practically possible. All concealed wood members in ceiling, partitions, cabinet work, etc., shall be treated fully and liberally with solignum before placing in position.

**9.00 MODE OF MEASUREMENT**

Unless noted otherwise in the bills of quantities, the method of measurement for various items shall be generally in accordance with IS 1200 subject to the following:

1) All work shall be measured net as fixed. No extra measurement will be given for shape, joints, splayed, meeting stiles of doors and windows and shall be measured in unit of square metre. Door frames shall be in cubic metre, if measured separately.

2) Area over one face inclusive of exposed frame thickness (excluding width of cover mould) shall be measured in case of doors, windows and ventilators when frames are included in the item. Portions embedded in masonry or flooring shall not be measured.

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## PAINTING AND POLISHING WORKS

### 1.00 SCOPE

This specification covers the general requirements for painting, white washing, etc. of both interior and exterior surfaces of masonry, concrete, plaster and all carpentry works, structural and miscellaneous steel works. This also includes furnishing of all materials, labour, scaffolding, tools and appliances etc.

### 2.00 GENERAL REQUIREMENTS

- 2.01 Before commencing painting, the Contractor shall obtain the approval of the Employer's /Architect's in writing regarding the scheduling of work to minimise damage, disfiguration or staining by other trades. He shall also undertake necessary precautions to prevent damage, disfiguration or staining of other trades or other installations.
- 2.02 Contractor shall protect not only his own work at all times but also all the adjacent work and materials by suitable covering, protection or other methods acceptable to the Employer's /Architect's during progress of painting. It is the responsibility of the contractor upon completion of painting work to remove all paint and varnish spots from floors, walls, glass panes and other surfaces and restore them to the original conditions. The work generally to be touched up shall be attended to after all other workmen have left. All accumulated material, rubbish etc. have to be cleared and the premises left in clean, orderly and acceptable conditions.
- 2.03 Contractor shall provide scaffolding wherever necessary erected on double supports tied together by horizontals, no ballies, bamboos or planks shall rest on or touch the surface which is being painted. Contractor is deemed to have considered the following while tendering and no extra claim on account of these will be entertained.
  - a) Supplying the paint and other materials required of approved colour and brand.
  - b) Preparing the surface to be painted
  - c) Providing and erecting scaffolding and removing the same after completion of the work.
  - d) Lifting of materials to any height and painting at all levels.
  - e) Application of paint as per the specification and to Manufacturer's instructions.
  - f) Curing, protecting the painted surface, adjacent work and thoroughly cleaning of the premises.
- 2.04 The Contractor shall furnish all skilled and unskilled labour, plant, equipment, scaffolding, all materials etc. required for complete execution of the work in accordance with the drawings and as described herein and / or as directed by the Employer's /Architect's.
- 2.05 The Contractor shall strictly follow, at all stages of work, the stipulations contained in the Indian Standard Safety Code and the provisions of the Safety Rules as specified in the General Conditions of the Contract for ensuring safety of men and materials.
- 2.06 Any approval, instructions, permission, checking, review etc. whatsoever by the Employer's /Architect's shall not relieve the Contractor of his responsibility and obligation regarding adequacy, correctness, completeness, safety, strength, workmanship etc.

### 3.00 CODES AND STANDARDS

3.01 All standards, specifications, acts, and codes of practice referred to herein shall be the latest editions including all applicable official amendments and revisions.

3.02 List of certain important Indian Standards, Acts and Codes applicable to this work is given below. However, the applicable standards and codes shall be as per but not limited to the list given below:

IS: 157 Chemical resistant paint

IS: 161 Oil resistant paint

IS: 162 Ready mixed paint, brushing, fire resisting, silicate type for use on wood, colour as required

IS: 348 French polish

IS: 423 Plastic wood for joiners filter

IS: 427 Distemper, dry, colour as required

IS: 428 Distemper, oil emulsion, colour as required

IS: 712 Building limes

IS: 1200 Method of measurement of building and civil Engineering works

IS: 1477 Code of practice for painting of ferrous metals and buildings

IS: 2074 Ready mixed paint, air drying, red oxide – zinc chrome priming

IS: 2922 Specification for wooden tent mallets

IS: 2932 Enamel painting

### 4.00 MATERIALS

#### 4.01 General

Paint shall be ready mixed and of first quality of the approved brand and manufacturer. The paint shall generally conform to the chemical composition and other characteristics laid down in the relevant Indian standard specification. Mixing of paint by the Contractor at site will not be allowed. However, in the case of selection of special shades and colors (not available standard shades) the Contractor shall mix different shades of ready mixed paints as per Manufacturer's instructions and as directed by the Employer's /Architect's.

Materials shall be the highest grade products of well known approved manufacturers and shall be delivered to the site in original sealed containers, bearing brand name, manufacturer's name and colour shade, with labels intact and seals unbroken. All materials shall be subject to inspection and approval by the Employer's /Architect's. It is desired that materials of one manufacturer only shall be used as far as possible and paint of one shade be obtained from the same manufacturing batch. All paints shall be subjected to analysis from random samples taken at site from the painter's bucket, if so desired by the Employer's /Architect's.

All unspecified materials shall be of the highest quality available and shall conform to the latest IS standards. All such materials shall be made by reputable recognized manufacturers and shall be approved by the Employer's /Architect's. Any materials found not conforming to the relevant specification shall have to be removed by the Contractor from the site at his own expenses.

All colours shall be as per the painting schedule and tinting and matching shall be done to the satisfaction of the Employer's /Architect's. In such cases, where samples are required, they shall be executed in advance with the specified materials for the approval of the Employer's /Architect's.

All primer coats shall be compatible to the material of the surface to be finished as well as to the finishing coats to be applied.

**4.02 Synthetic Enamel Paint**

Synthetic enamel paint shall be made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give a smooth, hard, durable and glossy finish to all exterior and interior surfaces. White and pastel shades shall resist yellowing and darkening with ageing, The paint shall conform to IS: 2932 and IS: 2933.

**4.03 Waterproof Cement Paint**

Water proof cement paint shall be made from best quality white cement and lime resistant colours with accelerators, waterproofing agents and fungicides. The paint shall conform to IS: 5410.

**4.04 Dry Distemper**

Dry distemper of required colour conforming to IS: 427 and of approved brand and manufacturer shall be used. The primer where used shall be cement primer or distemper primer. These shall be of same manufacturer as that of distemper.

**4.05 Lime for White Washing**

Lime for white washing shall be pure shell lime or fat lime, or a mixture of both and shall conform to IS: 712 (latest edition) Samples of lime shall be submitted to the Employer's /Architect's for approval and lime as per the approved samples shall be brought to site in an unslaked condition.

**4.06 Lime and Mineral for Colour Wash**

This shall be done with mineral colours not affected by lime added to white wash. No colour wash shall be done until a sample of the colour wash to the required tint or shade has been approved by the Employer's /Architect's. The colour shall be of even tint or shade over the whole surface. If it is blotchy or otherwise badly applied, it shall be redone by the Contractor at his own cost.

**4.07 Acrylic Emulsion Paint**

Shall be water based acrylic copolymer emulsion with rutile titanium dioxide and other selected pigment and fungicide. It shall exhibit excellent adhesion to plaster and cement surface and shall resist deterioration by alkali salts. The paint film shall allow the moisture in wall to escape without peeling or blistering the paint. After it is dried, the paint should be able to withstand washing with mild soap and water without any deterioration in colour or without showing flaking, blistering or peeling.

**4.08 Oil Bound Distemper**

Oil bound distemper (IS: 428-1969) of approved brand and manufacture shall be used. The primer where used be cement primer or distemper primer. These shall be of same

manufacturer as that of distemper. The distemper shall be diluted with prescribed thinner in a manner recommended by the manufacturer. Only sufficient quality of distemper required for a day's work shall be prepared.

#### 4.09 French Polish

French polish shall be an approved make conforming to IS: 348.

### 5.00 STORAGE

The Contractor shall arrange for safe and proper storage of all materials and tools. Paints shall be kept covered at all times and mixing shall be done in suitable containers. All necessary precautions shall be taken by the Contractor to prevent fire.

### 6.00 PREPARATION OF SURFACE

#### 6.01 Wood Work

Pretruding timber fibre shall be removed and all holes shall be filled with teakwood batten, the nail marks shall be covered with putty. The work shall then be sanded first with G/80 sand paper followed by G/120 or G/150 sand paper. Sanding should be taken up only when it can be followed immediately by painting.

#### 6.02 Steel work

The surface shall be thoroughly cleaned sand prepared and / or rubbed with emery cloth if necessary to remove grease, mortar or any other foreign materials. In case of rusted surface, it shall be first cleaned with steel wire brushes till the corroded crust is removed. The cleaned surface shall be shiny and free from brush marks, patches, blisters and other irregularities. The surface thus finished shall be got approved before painting.

#### 6.03 Masonry, concrete and plastered surface

Concrete / masonry surface and cement plastered surfaces shall be thoroughly cleaned of mortar droppings and other sticking. All loose scales and flakes shall be removed by rubbing with Hessian cloth or sand papering. All holes shall be filled and the surface rubbed smooth to get evenness of the existing surface. The surface shall be free from all oil, grease, efflorescence, mildew, loose paint or other foreign and loose materials. Masonry cracks shall be cleaned out and patch filled with mortar similar to the original surface and uniformly textured. Where this type of resurfacing may lead to the finishing paint being different in shade from the original surfaces, the resurfaced area shall be treated with a minimum of one coat of cement primer and should be continued to the surrounding area for a distance of at least 100mm.

Surfaces with mildew or efflorescence shall be treated as below:

##### (a) MILDEW

All mildewed surfaces shall be treated with an approved fungicide such as ammonia wash consisting of 7 gm. of copper carbonate dissolved in 80 ml liquor and diluted to 1 liter with water or 2.5 percent magnesium silica fluoride solution and allowed to dry thoroughly before paint is applied.

##### (b) EFFLORESCENCE

All efflorescence shall be removed by scrubbing the affected surface with a solution of mariatic acid and in water (1:6 to 1:8) and then washed fully with clear water and allowed to dry thoroughly.

Area to be distempered shall be applied with one coat of white chalk solution mixed with required quantity of glue or plaster of Paris and shall be sand papered before distempering. The area to be cement painted shall be wetted by sprinkling of water with fine spray. The surface shall be sprayed several times with a few minutes intervals between each spraying to allow the moisture to seek into the surface.

#### 6.04 IRON AND STEEL SURFACE

Surface of steel work to be painted shall be thoroughly cleaned of all grease, oil dirt, rust, foreign matter like cement splashing, etc. by suitable solvent and mild rubbing with abrasive paper / hand scrapping to the full satisfaction of the Employer's /Architect's. Clearing with solvents / scraping shall be limited to the affected areas only. All galvanized iron surfaces shall be pretreated with a compatible primer according to the manufacturer's direction. Any abrasion in shop coat shall be touched up with the same quality of paint as the original coat.

- 6.05 Before starting the work, the Contractor shall obtain the approval of the Employer's /Architect's regarding the soundness and readiness of the surface to be painted on.

### 7.00 APPLICATION

#### 7.01 GENERAL

Before the commencement of the work the Contractor shall provide sample panels of painting at his own cost for the approval of the Employer's /Architect's to enable him to keep an accurate check on the materials supplied and final shade to be painted. It is however the express responsibility of the Contractor to provide any deviations and defects shall have to be rectified by the Contractor at his own cost.

The method of application shall be as recommended by the manufacturer. In case of selection of a special shade and colour (not available in standard shades) the Contractor shall prepare test panels in different shades of minimum size 1 metre square as instructed by the Employer's /Architect's and obtain his approval prior to applications of the finishing paints.

Proper tools and implements shall be used. Scaffolding if used shall be independent of the surface to be painted to avoid shade differences of the freshly repaired anchor holes. Painting shall be done by skilled labour in a workman like manner. All materials shall be evenly applied, so as to be free of sags, runs, crawls or other defects. All coats shall be of proper consistency. In case of application by brush, no brush marks shall be visible. The brushes shall be clean and in good condition before application of the paint.

All priming undercoats for painting shall be applied by brush only. Roller and spray equipment, etc., shall not be used.

The cleaned surface shall be dusted and a primer shall be applied.

One shop coat of red oxide or zinc chromate primer or as specified shall be given to all iron surfaces. Painting work on steel and iron surface shall conform to IS : 1477 (Part I and II).

All primer coats shall be compatible to the material of the surface to be finished as well as to the finishing coat to be applied.

No work shall be done under conditions that are unsuitable for the production of good results. No painting shall be done when plastering is in progress or is drying. Paint which seals the surfaces to moisture shall be applied only after the moisture on and below the surface has dried out.



All coats shall be thoroughly dry before being sand papered or before the succeeding coat is applied. Coats of painting as specified are intended to cover surfaces perfectly. In case the surface is not covered properly by applying the specified number of coats, further coats shall be applied by the Contractor when so directed by the Employer's /Architect's at no extra cost.

All primers and under coats shall be tinted to approximate the colour of the finishing coats. Finished coats shall be of exact colour and shade as approved samples and all finish shall be uniform in colour and texture. All parts of moulding and ornaments shall be left clean and true to finish.

Stopping and filling carpentry work should be done when the primer is just dry. For deep scratches, holes etc. stopping shall be done with putty of plastic wood (IS 423). Putty can be white lead with linseed oil base or synthetic metal putty.

For all minor scratches and rough surfaces, like flush door's faces filling made out of one part of white lead, two parts of whiting (powdered chalk) mixed and kneaded in double boiled linseed oil shall be evenly applied and rubbed down with G/220 or G/240 sand paper after allowing it to dry overnight.

Painting shall be done by skilled labourers in a workmanlike manner. All materials shall be evenly applied so as to be free from sags, runs, crawls, or other defects. All coats shall be of proper consistency and shall be well brushed out, so that no brush marks are visible, except varnish and enamels which shall be uniformly flowed on.

The brushes shall be clean and in good condition before application of paint. No work shall be done under conditions that are unsuitable for production of good results.

The undercoating should be nearest to the specified colour of the finishing coat. Ready mixed synthetic enamel paint or fill paint may be used for the undercoat. The undercoat shall be uniform and free of all brush marks.

Undercoats should be completely dry before finishing coat is taken up. For synthetic enamels overnight and for oil paints, a whole day shall be left between undercoat and finishing coat. The undercoat shall then be rubbed with G/240 sand paper and dusted clean. The finishing coat of approved paint shall then be applied. If the surface is not satisfactory additional finish coats shall be applied at no extra cost. The paints shall be applied with bristle brushes and not horse hair ones.

#### 7.02 OIL / ENAMEL / ALUMINIUM PAINT

Ready mixed oil paint, synthetic enamel paint, Aluminium paint, etc; shall be brought in original containers and in sealed tins. If for any reason thinner is necessary the brand and quantity of thinner recommended by the manufacturer or as instructed by the Employer's /Architect's shall be used.

After allowing 24 hours for drying of primer coat specified quality paint shall be applied evenly and smoothly. If required filler putty coating may be given to give smooth finish. A filler putty coating has to be given after primer coat in the case of wooden surfaces. The putty shall be made from pure whiting mixed to the proper consistency with new linseed oil. A little white lead being mixed to help hardening of putty. On no account putty is to be used before primary coat. Each coat shall be allowed to dry out thoroughly and then lightly rubbed down with sand paper and cleaned of dust before the next coat is applied. Number of coats shall be as specified in the item and if however the finish of the surface is not uniform additional coats as required shall be applied to get good and uniform finish at no extra cost.

After completion no hair marks from the brush or clogging of paint puddles in the corners of panel angles of mouldings shall be left on the work. The glass panes floor etc; shall be cleaned of stains.

When the final coat is applied, if directed, the surface shall be rolled with a roller or if directed it shall be stippled with a stippling brush.

#### 7.09 **Chemical Resistant, Fire Resistant and Oil Resistant Paints**

In general, method of application of these paints shall be strictly as per manufacturer's specification.

#### 7.10 **Polishing and Varnishing**

##### a) **Colourless Lacquer Polish**

##### **Polish**

Nitro cellulose lacquer polish of approved brand manufacture and finish shall be used.

##### **Preparation of Surface**

The surface shall be cleaned and all unevenness shall be rubbed down smooth with suitable grade sand paper and well dusted. Knots if visible shall be made good as per the direction of the Employer's /Architect's. Holes and indentation on the surface shall be stopped with glazier's putty. The surface then shall be given a coat of ready made ragging wood filler and allowed to dry for maximum 4 hours. The surface again shall be rubbed down perfectly smooth with suitable emery paper and wiped clean. There after a finishing touch up with ragging wood filler is to be given and allowed to dry. To receive the polishing the surface is again rubbed down smooth.

##### **Application**

Nitro cellulose sealer coat of approved manufacturer shall be applied strictly as per the manufacturer's specification. The polish shall be applied with a sprayer at suitable pressure and viscosity as recommended by the manufacturer, and allowed to dry for 4 to 6 hours and rubbed down with suitable grade emery. The surface shall be again sprayed with 3 coats of NC lacquer (3 wet on wet coat). Finally the surface shall be given wax polishing by using rubbing compound.

##### b) **MELAMINE POLISH FINISHES:**

##### ❖ **GLOSSY FINISH:**

As specified in the Approved make of materials, Natural Wood finish clear glossy is a premium quality melaminised coating specially formulated as a protective and decorative finishing clear coating for wooden surfaces.

#### **TECHNICAL DATA**

Method of application: Brushing at 25-30 seconds by Ford Cup B4 at 30 degree C.

Spraying at 20-25 seconds by ford Cup at 30 degree C

Thinner recommended : Brushing - Thinner 106  
Spraying - Thinner 124

Thinner intake : 20-25% by volume

Mixing ratio : Base to hardener in 10:1 by volume

Drying Time : 8 hours

Surface dry - less than 30 minutes  
 Hard dry - 16 - 20 hours  
 Recoating period – Overnight

Finish : 25 microns film thickness smooth and glossy

Flash point : Above 14 degree C (57 degree F)

Sand the surface along the grains with Emery Paper No. 180 or with a suitable grade sand paper. Brush the surface free of loose dust. Fill the wood using Wood Filler of approved make. Remove excess filler immediately after applications. Allow 2-3 hours of drying, before sanding with Emery Paper No. 240 or 280. If desired, apply Wood Stains by ragging after filling step or mix it in Natural Wood Finish of approved make upto 20% by volume and apply by spraying after Sealer Coat. In application by ragging allow a drying time of 5-10 minutes in between coats and 30-60 minutes before over coating with finish coats. Apply a coat of Natural Wood Finish Clear Sealer. After overnight drying, smooth sand with Emery Paper No. 320 and wipe the surface free of loose dust. Apply Natural Wood Finish Clear Glossy of approved make as follows. Ensure that the surface to be coated is free from loose matter. Natural Wood Finish Clear Glossy of approved make is a two component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic or enameled container. Allow the mixture to stand for 30 minutes and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hours. To enhance gloss and decorative value Natural Wood Finish Clear Glossy of approved make can be buffed using suitable buffing mops but only after 48 hours of application.

#### ❖ **MATT FINISH:**

Natural Wood finish clear matt of approved make is a premium quality melaminised coating specially formulated as a protective and decorative finishing clear coating for wood.

#### **TECHNICAL DATA**

Method of application: Brushing at 25-30 seconds by Ford Cup B4 at 30 degree C

Spraying at 20-25 seconds by ford Cup at 30 degree C

Thinner recommended : Brushing - Thinner 106  
 Spraying - Thinner 124

Thinner recommended : Brushing - Thinner 106  
 Spraying - Thinner 124

Thinner intake : 20-25% by volume

Mixing ratio : Base to hardener in 10:1 by volume

Drying Time : 8 hours  
 Surface dry - less than 30 minutes  
 Hard dry - 16 - 20 hours  
 Recoating period – Overnight

Finish : 25 microns film thickness smooth and matt

Flash point : Above 14 degree C (57 degree F)

Sand the surface along the grains with Emery Paper No. 180 or with a suitable grade sand paper. Brush the surface free of loose dust. Fill the wood using Wood Filler of approved make. Remove excess filler immediately after applications. Allow 2-3 hours of drying, before sanding with Emery Paper No. 240 or 280. If desired, apply Wood Stains of approved make by ragging after filling step or mix it in Natural Wood Finish of approved make upto 20% by volume and apply by spraying after Sealer Coat. In application by ragging allow a drying time of 5-10 minutes in between coats and 30-60 minutes before over coating with finish coats. Apply a coat of Natural Wood Finish Clear Sealer of approved make. After overnight drying, smooth sand with Emery Paper No. 320 and wipe the surface free of loose dust. Apply Natural Wood Finish Clear matt of approved make as follows. Ensure that the surface to be coated is free from loose matter. Natural Wood Finish Clear Matt is approved make is a two component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic or enameled container. Allow the mixture to stand for 30 minutes and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hours.

c) **FRENCH POLISHING:**

French spirit polish shall be an approved make conforming to IS 348. If it has to be prepared on site, the polish shall be made by dissolving 0.7 Kg of best shellac in 4.5 litres of methylated spirit without heating. To obtain required shade, pigment may be added and mixed.

Surface shall be cleaned. All unevenness shall be rubbed down smooth with sand paper and well dusted. Knots if visible shall be covered with a preparation of red lead and blue. Resinous or loose knots and gaps filled with seasoned timber pieces made level with reset of the surface. Holes and indentations on surface shall be filled with putty made of whiting and linsed oil. Surface shall be given a coat of filler made of 2.25 kg. of whiting in 1.5 litre of methylated spirit. When it dries surface shall again be rubbed down perfectly smooth with sand paper and wiped clean.

Piece of clean fine cotton cloth and cotton wool made into shape of pad shall be used to apply polish. The pad shall be moistures with polish and rubbed hard on the surface applying the polish sparingly but uniformly and completely over the entire surface. It shall be allowed to dry and another coat applied in the same way. To give finishing coat, the pad shall be covered with a fresh piece of clean fine cotton cloth, slightly damped with methylated spirit and rubbed lightly and quickly with a circular motion, till the finished surface attains uniform texture and high gloss.

d) **WAX POLISHING:**

Wax polish shall either be prepared on site or obtained ready made from market. Polish made on the site shall be prepared from a mixture of pure bees wax, linseed oil, turpentine oil and varnish in the ratio of 2: 1 1/2: 1 1/2 by weight. The bees wax and the boiled linseed oil shall be heated over a slow fire when the wax is completely dissolved the mixture shall be cooled till it is just warm, and turpentine oil and varnish added to it in the required proportions and the entire mixture is well stirred.

Surface shall be prepared as described under French Spirit Polish except that the final rubbing shall be done with sand paper which has been slightly moistures with linseed oil.

Mixture of polish shall be applied evenly with a clean cloth pad in such a way that no blank patches are left and rubbed continuously for half an hour. When

the surface is quite dry a second coat shall be applied in the same manner and rubbed continuously for half an hour or until the surface is dry. Final coat shall then be applied and rubbed for 2 hours or more if necessary, until the surface has assumed a uniform Gloss and is quite dry showing no sign of stickiness when touched. Gloss of the polish depends on the amount of rubbing, therefore rubbing must be continuous and with uniform pressure and frequent change in direction.

e) **VARNISHING**

Surface shall be cleaned. All unevenness shall be rubbed down smooth with sand paper and well dusted. Knots is visible shall be covered with a preparation of red lead and Glue. Resinous or loose knots and gaps filled with seasoned timber pieces made level with rest of the surface. Holes and indentations on surface shall be filled with putty made of whiting and linseed oil. Surface shall be given a coat of filler made of 2.25 kg of whiting of 1.5 litre of mentholated spirit. When it dries surface shall again be rubbed down perfectly smooth and sand paper and wiped clean.

After preparation or surface, two coats of clean boiled linseed oil shall be applied at sufficient interval of time. After the linseed oil has dried two coats of varnish obtained from approved manufacturer shall be applied at sufficient interval of time. If the surface fails to produce the required gloss an additional coat shall be applied without any extra cost.

8.00 **PROTECTION**

Contractor shall provide and use sufficient number of drop clothes, covers, tarpaulins and other screens to protect adjacent surfaces and shall remove all splatter and stains from such surfaces. The contractor shall also protect his own work.

Furniture and other movable objects, equipment, fittings and accessories shall be moved, protected and replaced upon completion of the painting work. All stationary items of equipment shall be well covered so that no paint can fall on them. Work finished by other agencies shall be well protected. All protection shall be as per instruction of the Employer's /Architect's.

9.00 **CLEANING UP**

The Contractor shall upon completion of painting etc. remove all marks and make good surfaces, where paint has spilled, splashed or splattered, including all equipment, fixtures, glass furniture, fittings, etc. to the satisfaction of the Employer's /Architect's.

10.00 **ACCEPTANCE CRITERIA**

10.01 All painted surfaces shall be uniform and pleasing the appearance.

10.02 The colour, texture etc. shall match exactly with approved samples.

10.03 All stains, splashes and splatters of paint shall be removed from surrounding surfaces.

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**CHENNAI METRO RAIL LIMITED****(A JOINT VENTURE OF GOVERNMENT OF INDIA AND GOVERNMENT OF TAMILNADU)****TECHNO COMMERCIAL TENDER  
TWO COVER SYSTEM****INTERIOR WORKS SUCH AS WARDROBE AND KITCHEN FOR THE  
STAFF QUARTERS AT CMRL DEPOT, KOYAMBEDU, CHENNAI****600107****Cover – B****Price Tender****PART – II : BILLS OF QUANTITIES****DATE OF SUBMISSION OF TENDER - 19-06-2017 UP TO 14.00 Hours****DATE OF OPENING OF TENDER - 19-06-2017 UP TO at 14.30 Hours****TO BE SUBMITTED TO:****The JOINT GENERAL MANAGER (DESIGN)****Chennai Metro Rail Limited**

Admin. Building, CMRL Depot

Poonnamallee High Road ,

Koyambedu, Chennai - 600107

**TENDER SUBMITTED BY:**

M/s. \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

INTERIOR WORKS SUCH AS WARDROBE AND KITCHEN FOR THE STAFF QUARTERS AT CMRL DEPOT, KOYAMBEDU, CHENNAI		
Summary		
S.No	Description of Works	Amount in Rs
1	(I) Bed Room Wardrobe	
	(II) Kitchen units	
	Total Amount in Rs.....	
	Service tax to be quoted by the contractor in % on Total Amount	
	Service tax to be quoted by the contractor in Amount	
	Grand Total including Service Tax	

**INTERIOR WORKS SUCH AS WARDROBE AND KITCHEN FOR THE STAFF QUARTERS AT CMRL DEPOT,  
KOYAMBEDU, CHENNAI**

**BILLS OF QUANTITIES**

**INTERIOR WORKS**

S.No	Total Quantity	Unit	Description of Work	Rate in INR		Per	Amount in Rs....
				In Figures	In Words		
(I)	BED ROOM WARDROBE						
1			Providing and fixing Wardrobe including loft as per drawing but in general, it shall be made out of 18 mm thick MDF on all sides including top, with intermediate shelves with necessary shelf supports, finished with approved shades of Laminate. The open able shutter and shall be Straight Edges and shall be made out of 18 mm thick MDF and external surface shall be finished with Laminate. Rate shall include for providing matching 2mm PVC edgeband for shelves and dividers, made of MDF ,as required.				
			Rate shall be inclusive of providing and fixing mirror on shutter as per drawing. The rate shall also include for fixing all the hardware fixing labour, all complete from Hettich . Garment Rails 30x15mm for required length as per drawing including supports as necessary, telescopic runner channel for drawers, locking arrangements for all internal drawers and external shutter including master key.				
(a)	1.00	Nos	TYPE 1 WARDROBE : MASTER BED ROOM :1940 x 2000 (NO LOFT)			Nos	
(b)	1.00	Nos	TYPE 2 WARDROBE : MASTER BED ROOM :1390 X 2000			Nos	
(c )	1.00	Nos	TYPE 2 LOFT SHUTTERING : MASTER BED ROOM : 1390 x 750			Nos	



S.No	Total Quantity	Unit	Description of Work	Rate in INR		Per	Amount in Rs....
				In Figures	In Words		
(d)	1.00	Nos	TYPE 3 WARDROBE : MASTER BED ROOM : 2000 x 2000			Nos	
(e )	1.00	Nos	TYPE 3 LOFT SHUTTERING : MASTER BED ROOM : 2000 x 750			Nos	
(f)	1.00	Nos	TYPE 4 WARDROBE : MASTER BED ROOM : 2010 x 2000 (NO LOFT)			Nos	
(g)	1.00	Nos	TYPE 5 WARDROBE : MASTER BED ROOM : 2270 x 2000			Nos	
(h)	1.00	Nos	TYPE 5 LOFT SHUTTERING : MASTER BED ROOM : 2270 x 750			Nos	
(i)	1.00	Nos	TYPE 6 WARDROBE : MASTER BED ROOM : 1800 x 2000			Nos	
(j)	1.00	Nos	TYPE 6 LOFT SHUTTERING : MASTER BED ROOM : 1800 x 750			Nos	
(k)	1.00	Nos	TYPE 7 WARDROBE : MASTER BED ROOM : 1620x 2000			Nos	
(l)	1.00	Nos	TYPE 7 LOFT SHUTTERING : MASTER BED ROOM : 1620x 750			Nos	
<b>Total Amount (l) in Rs ....</b>							
<b>(II)</b>	<b>KITCHEN</b>						
			FLOOR MODULE Carcase - Providing and fixing of floor carcase of 16mm BWR grade plywood of reputed brand.The ply will be laminated with 0.8mm approved laminate and 0.8mm edgebanded.The carcase will come with one removable shelf.Shutters will be made of 16mm BWR grade ply and laminated on both sides with 1mm laminate of approved shade .Shutters will be straight edged with 2mm edgeband.				

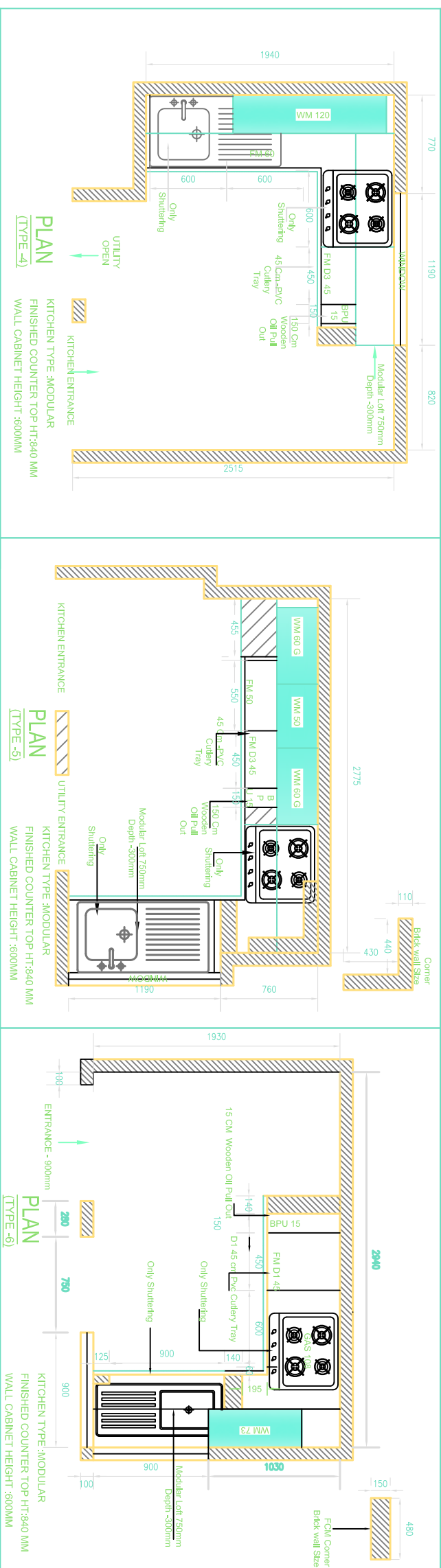
S.No	Total Quantity	Unit	Description of Work	Rate in INR		Per	Amount in Rs....
				In Figures	In Words		
			WALL MODULE & LOFT -Providing and fixing of floor carcase of 16mm BWR grade plywood of reputed brand.The ply will be laminated with 0.8mm approved laminate and 0.8mm edgebanded.The carcase will come with one removable shelf.Shutters will be made of 16mm BWR grade ply and laminated on both sides with 1mm laminate of approved shade .Shutters will be straight edged with 2mm edgeband. The rate shall inclusive for Supplying and fixing all the hardware ,accessories.( Kaff)				
			<b>Kitchen Type 1 :</b>				
(a)	I	Nos	Size: 2355x 600 x 700mm Ht. + 2090 x600mm x 700 mm Ht. (incl Loft) as per drawing.			Nos	
			1 no Cutlery Tray with Channels, hardware and supports as required for drawer of Size 450 x 550 x Ht 150mm each with				
			1 no Bottle Pull Out with 2 nosWooden Baskets of 150mm each, hardware and supports as required for drawer of Size 150 x 550 x Ht 650mm each with 100mm Handle				
			Remaining cabinets and loft with size as per drawing with shutters,hardware and supports as required for each with 150mm Handles				
(b)			<b>Kitchen - Type - 2</b>				
			Size: 1950x 600 x 700mm Ht. (incl Loft) + 1835x600mm x 700 mm Ht. as per drawing.				

S.No	Total Quantity	Unit	Description of Work	Rate in INR		Per	Amount in Rs....
				In Figures	In Words		
1			1 no Cutlery Tray with Channels, hardware and supports as required for drawer of Size 450 x 550 x Ht 150mm each with 150mm Handle				
2			1 no Bottle Pull Out with 2 nos Wooden Baskets of 150mm each, hardware and supports as required for drawer of Size 150 x 600 x Ht 650mm each with 100mm Handle				
			Remaining cabinets and loft with size as per drawing with shutters, Hettich hinges, hardware and supports as required for each with 150mm Handles				
( C )			<b>Kitchen - Type - 3</b>				
			Size:1750 x 600 x 700mm Ht. + 1970x600mm x 700 mm Ht(incl.Loft). as per drawing.				
			1 no Cutlery Tray with Channels, hardware and supports as required for drawer of Size 450 x 600 x Ht 150mm each with 150mm Handle				
			1 no Bottle Pull Out with 2 nos woodenBaskets of 150mm each, hardware and supports as required for drawer of Size 150 x 600 x Ht 650mm each with 100mm Handle				
			Remaining cabinets and loft with size as per drawing with shutters, Hettich hinges, hardware and supports as required for each with 150mm Handles				
(d)			<b>Kitchen - Type - 4</b>				

S.No	Total Quantity	Unit	Description of Work	Rate in INR		Per	Amount in Rs....
				In Figures	In Words		
			Size: 1940 x 600 x 700mm Ht. + 1960x600mm x 700 mm Ht. (incl Loft) as per drawing.				
			1 no Cutlery Tray with Channels, hardware and supports as required for drawer of Size 450 x 600 x Ht 150mm each with 150mm Handle				
			1 no Bottle Pull Out with 2 nos wooden Baskets of 150mm each, hardware and supports as required for drawer of Size 150 x 600 x Ht 650mm each with 100mm Handle				
			Remaining cabinets and loft with size as per drawing with shutters, Hettich hinges, hardware and supports as required for each with 150mm Handles				
( e)			<b>Kitchen - Type - 5</b>				
			Size: 2775 x 600 x 700mm Ht. (incl Loft) + 1950x600mm x 700 mm Ht. as per drawing.				
			1 no Cutlery Tray with Channels, hardware and supports as required for drawer of Size 450 x 600 x Ht 150mm each with 150mm Handle				
			1 no Bottle Pull Out with 2 nos wooden Baskets of 150mm each, hardware and supports as required for drawer of Size 150 x 600 x Ht 650mm each with 100mm Handle				

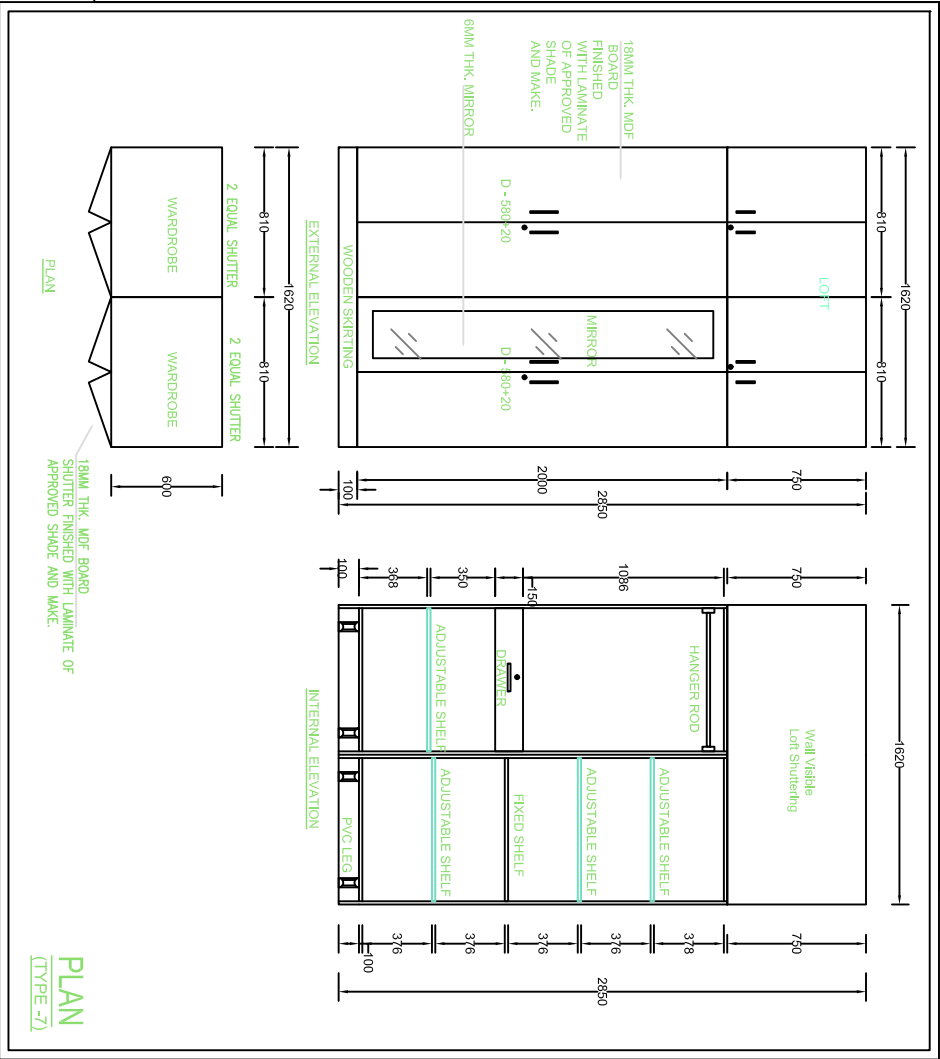
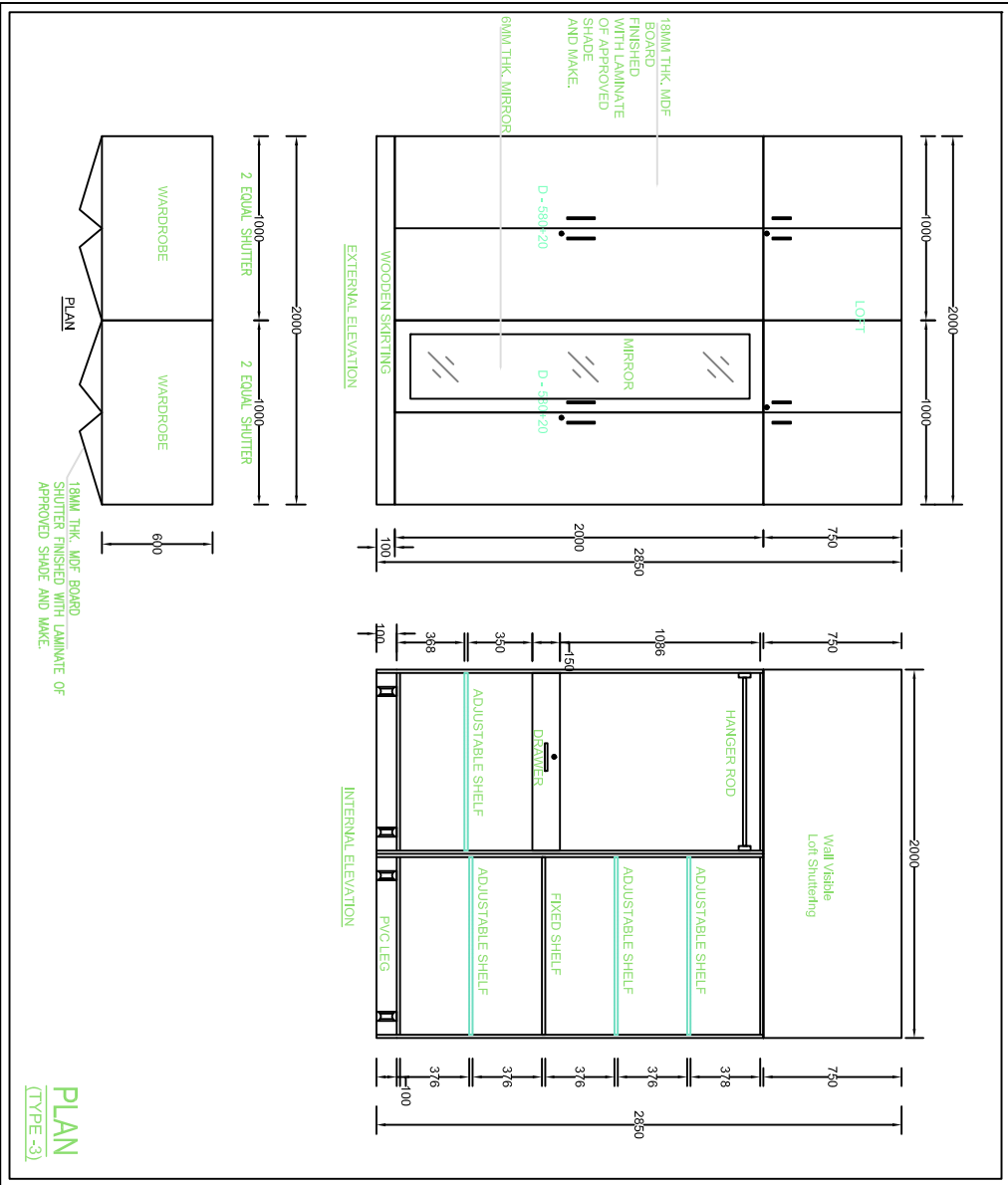
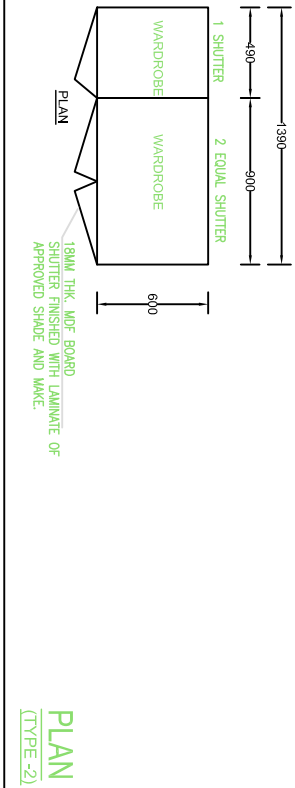
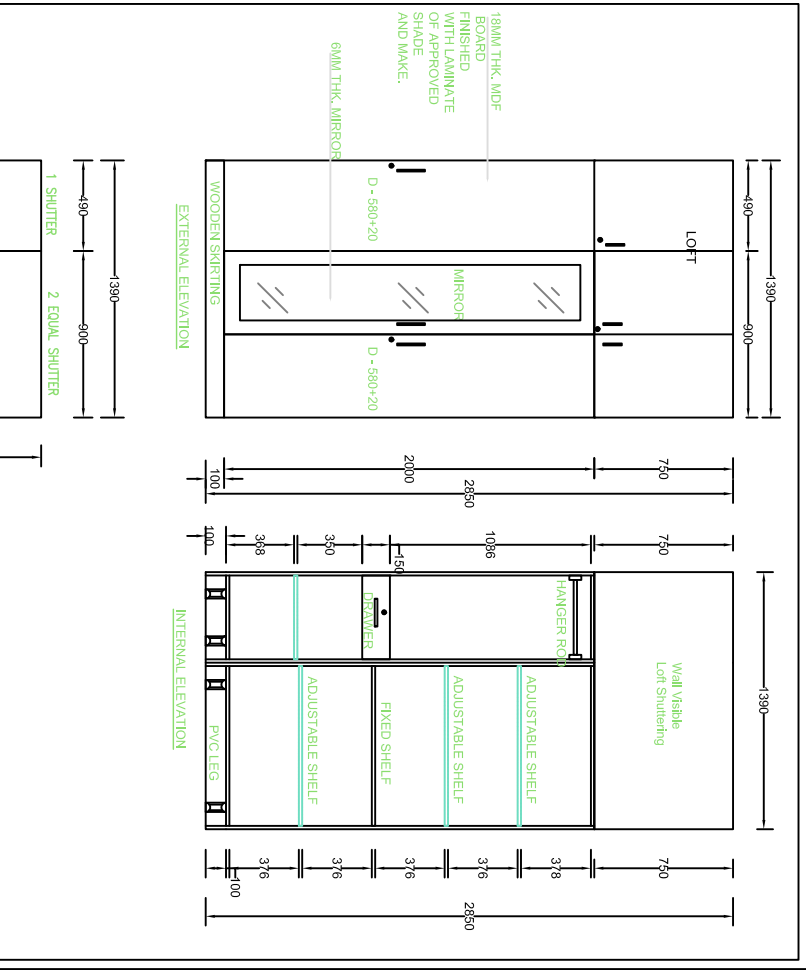
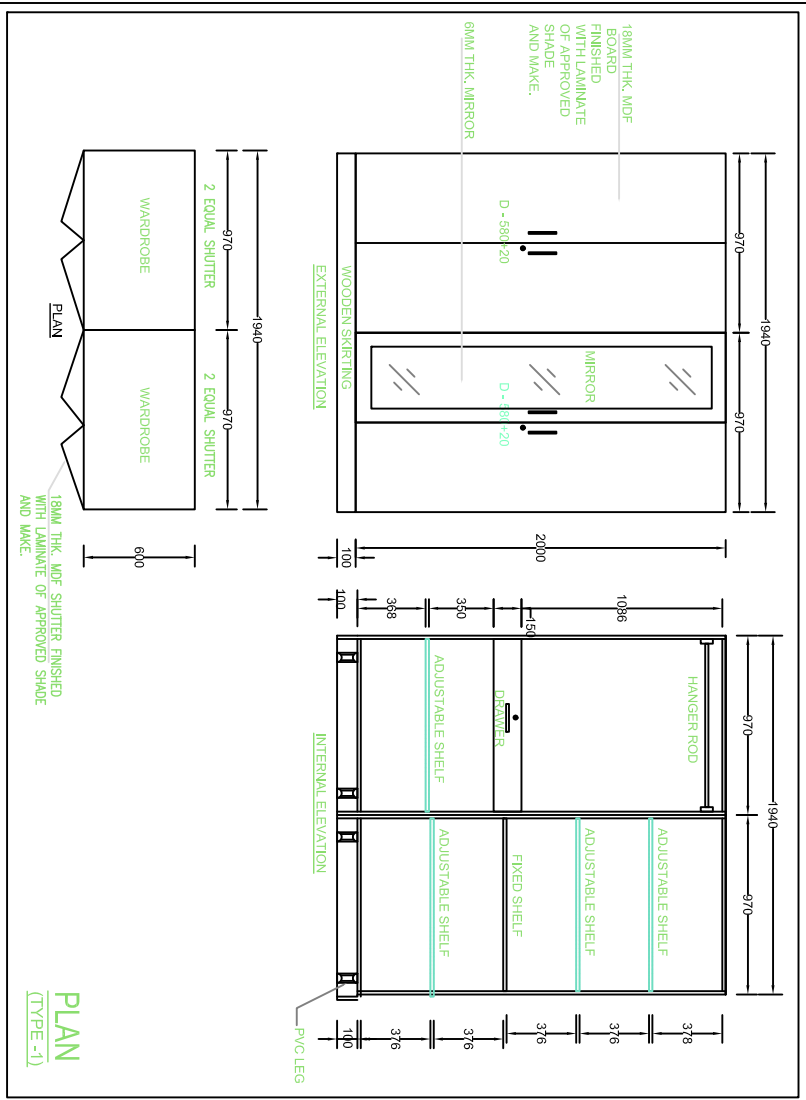
S.No	Total Quantity	Unit	Description of Work	Rate in INR		Per	Amount in Rs....
				In Figures	In Words		
			Remaining cabinets and loft with size as per drawing with shutters, Hettich hinges, hardware and supports as required for each with 150mm Handles				
(f)			<b>Kitchen - Type - 6</b>				
			Size: 1970 x 600 x 700mm Ht. + 1930x600mm x 700 mm Ht(incl.loft). as per drawing.				
			1 no Cutlery Tray with Channels, hardware and supports as required for drawer of Size 450 x 600 x Ht 150mm each with 150mm Handle				
			1 no Bottle Pull Out with 2 nos wooden Baskets of 150mm each, hardware and supports as required for drawer of Size 150 x 600 x Ht 650mm each with 100mm Handle				
			Remaining cabinets and loft with size as per drawing with shutters, Hettich hinges, hardware and supports as required for each with 150mm Handles				
(g)			<b>Kitchen - Type - 7</b>				
			Size: 2490 x 600 x 700mm Ht. + 1320 x 600 x 700 (incl.Loft)as per drawing.				
			1 no Cutlery Tray with Channels, hardware and supports as required for drawer of Size 450 x 600 x Ht 150mm each with 150mm Handle				

S.No	Total Quantity	Unit	Description of Work	Rate in INR		Per	Amount in Rs....
				In Figures	In Words		
			1 no Bottle Pull Out with 2 nos wooden Baskets of 150mm each, hardware and supports as required for drawer of Size 150 x 600 x Ht 650mm each with 100mm Handle				
			Remaining cabinets and loft with size as per drawing with shutters, Hettich hinges, hardware and supports as required for each with 150mm Handles				
			<b>Total Amount (II) in Rs...</b>				
			<b>Net Total Amount (I + II) in Rs...</b>				



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**NOTE:**  
EXPOSED CARCASS SIDES TO BE COVERED WITH NEAREST  
MATCHING DOOR COLOUR LAMINATE.  
ALL DIMENSION AND SIZES GIVEN ARE SUBJECT TO VERIFICATION  
ON JOB SITE & ADJUSTMENT TO FIT JOB CONDITION.  
ALL DIMENSION ARE IN 'MM'



T1	ISSUED FOR TENDER	27.04.17	SPM KC		
REV	DESCRIPTION	DATE	BY CHD.		

GRAPHIC SCALE:

A horizontal scale bar with alternating black and white segments. The segments are labeled 0, 1M, 2M, 4M, 6M, 8M, and 10M. The total length of the bar represents 10 miles.



**Chennai Metro Rail Limited**  
(A Joint venture of Govt. of India and Govt. of Tamilnadu)

## PROPOSED STAFF QUARTERS AT KOYAMBEDU DEPO

DRAWING TITLE:		SHEET NO:	
WARDROBE INTERIOR DETAILS		1/2	
SCALE : 1:20	DRAWN : PRASAD		
DATE : 20.01.16	CMD : CHANDRASEKHAR		
DRAWING NO:			
CMRML-HQ-RDFl-AR13-T-01-220560		T1	
Design	Issued	Engineered	Construction management

C.R.Narayana Rao ( Consultants ) Private Limited

**CRN**  
C R NARAYANA RAO

No. 10, Karpagambal Nagar  
Mylapore, Chennai-600 004.  
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