

## DELHI DEVELOPMENT AUTHORITY

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### DELHI DEVELOPMENT AUTHORITY CHIEF ENGINEER COMMON WEALTH GAMES ZONE

### NIT

<b>Name of Work</b>	: Commonwealth Games Projects Assigned to Delhi Development Authority (DDA)
<b>Sub-Head</b>	: Design Built Maintenance and Rental Contract for Temporary accommodation using Tensile Fabric at Commonwealth Games Village
<b>Estimated Cost</b>	: Rs. 42,17,40,320/-
<b>Earnest Money</b>	: Rs. 52,17,403/-
<b>Performance Guarantee</b>	: 5% of tendered amount
<b>Security Deposit</b>	: 5% of tendered amount
<b>Time Allowed</b>	: <b>Phase-I</b> 120 Days  <b>Phase-II</b> from Date of Completion of Phase-I upto 20 <sup>th</sup> Oct. 2010  <b>Phase-III</b> 20.10.2010 to 24.12.2010

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COMMON WEALTH GAMES-2010

## **INSTRUCTIONS TO EXECUTIVE ENGINEER**

The Executive Engineer may kindly attend the following points before inviting tender.

1. EE to go through NIT, any discrepancy in the approval of NIT, if noticed, shall immediately be brought to the notice of SE (P)-VI, DDA for necessary decision of the competent authority before issuing tender documents.
2. All the blanks in the approved NIT shall be filled by EE before issuing documents.
3. Condition at S.No. .... of PWD-6 regarding availability of site on page ..... Has been provided which Executive Engineer should confirm before issue of Press Tender Notice.
4. Date and time and other details are to be filled by Executive Engineer in PWD-6.
5. Executive Engineer should comply the order of the Chief Engineer / Engineer Member after the date of issue of NIT & up to the last date of issue of tender, shall be complied with under intimation of CE (CWG)/DDA.
6. Executive Engineer should insure that the A/A & E/S has been given by the competent authority before call of tender.
7. The NIT has been approved for Rs. 42,17,40,320/-subject to the above remarks.
8. All codal provision may be attended to before call of tender.

**AE (P)**

**EE(P)-I**

**SE(P)-VI**

**CE(CWG)**

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**Certified that this N.I.T Contents Pages ..... to .....**

## DELHI DEVELOPMENT AUTHORITY

### 1.0 Notice Inviting Tender

- 1.1 Executive Engineer, Commonwealth Games Division No -2, DDA Delhi invites tender from the pre-qualified agencies for the work mentioned below:-

S.No	NIT No.	Description of Work	Estimated Cost Earnest Money	Cost of Tender Docs
1.	.../EE(P)II/SE(P)VI/CWG/DDA/09-10	<p><b>Name of Work:</b> Commonwealth Games Projects Assigned to Delhi Development Authority (DDA)</p> <p><b>Sub Head:</b> Design Built Maintenance and Rental Contract for Temporary accommodation using Tensile Fabric at Commonwealth Games Village</p>	<p><u>Rs. 42,17,40,320</u> Rs. 52,17,403</p>	<p>Rs. 10,000 + 4% VAT = Rs. 10,400</p>

- 1.2 Period of Completion of Work Phase – I **120 Days or 20<sup>th</sup> May 2010**  
(which ever is earlier)

Period of Maintenance of Work Phase – II From date of completion of  
Phase - I upto 20<sup>th</sup> Oct 2010

Period of Removal Phase - III 20.10.2010 to 24.12.2010

- 1.3 Issue of tender document shall start from \*\*\* and will continue up to ...\*\*\*....  
Tender documents consisting of General and Special Conditions of Contract, bill of quantities, Drawings and specification of work etc. can be purchased from the office of the Executive Engineer, Commonwealth Games Division No.2, DDA, ..... between 11:00 AM to 4:00 PM from ...\*\*\*.. to ...\*\*\*.. every day except on Sundays and Public Holidays. Tender document will be issued from his office, during the hours specified periods as stated above, on payment of the following.

- (i) Rs. 10,400 (4% VAT + 10000) in cash as cost of Tender Document.
- (ii) Earnest money is Rs. 52,17,403/-. The tender shall be accompanied with earnest money in the shape of deposit at call receipt of scheduled bank fixed deposit receipt of a scheduled bank / demand draft of scheduled bank in favour of Sr. Accounts Officer “CAU” CWG-2010 DDA, 50% of the earnest money or Rs. 20 (twenty) Lacs, whichever is less, shall be in

the form prescribed above and balance can be accepted in the form of Bank Guarantee issued by a scheduled bank as per prescribed format in favour of Executive Engineer, Commonwealth Games Div. No. 2, DDA, New Delhi.

- 1.4 Pre- bid conference shall be held at 11.00 PM on 23.12.2009 at Chief Engineer Office for Commonwealth Games 2010, Shahpurjat, Khel Gaon, New Delhi to clear the doubts of intending tenderers, if any. Amendments, if any, will be issued by.....
- 1.5 Tender documents / bids supported by prescribed annexures shall be placed in sealed envelopes. Earnest money in the shape as described at no 1.3 (ii) is to be given in a separate envelope and is to be attached with the main envelope.
- 1.6 Tender documents duly compiled as above shall be received upto 3.00PM on the date of receipt of the bid as mentioned above and shall be opened by Executive Engineer or his authorized representative in his office on the same day at 3.30 PM.
- 1.7 The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it.
- 1.8 The agency will sign a J.V / consortium M.O.U as per the format enclosed.

**Notes:-**

Rs. means Indian Rupees  
DDA means Delhi Development Authority  
One Crore = Rs. 100,00,000

**Address of Executive Engineer**

Executive Engineer, Commonwealth Games  
Division no –II,  
DDA, Seedbed Park, Shakarpur  
Delhi, 110092  
(INDIA)

\* ***Blanks to be filled by Ex. Engineer***

**Executive Engineer  
Commonwealth Games Division No.: 2  
Delhi Development Authority**

## 2.0 ISSUE LETTER OF BIDDING DOCUMENT

**Name of Work** : Commonwealth Games Projects Assigned to Delhi Development Authority (DDA)

**Sub-Head** : Design Built Maintenance and Rental Contract for Temporary accommodation using Tensile Fabric at Commonwealth Games Village

Tender Document No.....

A Tender document is issued to :

M/s -----  
-----  
-----

**2.1** An amount of Rs..... (Rupees .....only) towards Tender Document Fee (Non-refundable) has been paid in the form of Crossed Demand Draft No.----- dated ----- in favour of Commonwealth Games 2010,DDA payable at New Delhi.

**Executive Engineer**  
**Commonwealth Games Division No.: 2**  
**Delhi Development Authority**

### 3.0 LETTER INVITING TENDER

- 3.1 Sealed tenders are invited from pre-qualified agencies / contractor by Commonwealth Games Division No. II on behalf of DDA for the work mentioned below:

**Name Of Work:** Commonwealth Games Projects Assigned to Delhi Development Authority (DDA)

**Sub Head:** Design Built Maintenance and Rental Contract for Temporary accommodation using Tensile Fabric at Commonwealth Games Village

- 3.2 a) The estimated cost of the work is Rs. 42,17,40,320/-  
b) Earnest money is Rs. 52,17,403/-
- 3.3 (i) The time allowed for carrying out the work will be 120 days or upto 20<sup>th</sup> May 2010 whichever is earlier and will reckoned from the 12<sup>th</sup> day after the date of issue of letter of acceptance of tender.  
(ii) Maintenance Period - Up to 20<sup>th</sup> Oct. 2010  
(iii) Removal of Structure - On or before 25<sup>th</sup> Dec 2010

- 3.4 The site for the work is available and is free from any encumbrances.

- 3.5 The Tender shall required to be submitted in a sealed envelope.

**Note:** - Earnest money in the shape as described at no 1.3 (ii) is to be given in a separate envelope and is to be attached with the main envelope.

- 3.6 Issue of tender document shall start from \*\*\* and will continue up to ...\*\*\*.... Tender documents consisting of General and Special Conditions of Contract, bill of quantities, Drawings and specification of work etc. can be purchased from the office of the Executive Engineer, Commonwealth Games Division No.2, DDA, ..... between 11:00 AM to 4:00 PM from ...\*\*\*.. to ...\*\*\*.. every day except on Sundays and Public Holidays. Tender document will be issued from his office, during the hours specified periods as stated above, on payment of the following.

- i). Rs. 10,000/- + 4% VAT (Rupees Ten Thousand Four Hundred Only) through DD / Pay Order in favour of Commonwealth Games 2010, DDA as cost of tender document (non-refundable) payable at Delhi / New Delhi.
- ii). Earnest money is Rs. 52,17,403/-. The tender shall be accompanied with earnest money in the shape of deposit at call receipt of scheduled bank / fixed deposit receipt of a scheduled bank / demand draft of scheduled bank in favour of Sr. Accounts Office "CAU" CWG-2010, DDA, 50% of the earnest money or Rs. 20 (twenty) lacs, whichever is less, shall be in the form prescribed above and balance can be accepted in the form of bank guarantee issued by a scheduled bank as per

prescribed format in favour of Executive Engineer, Commonwealth Games Division No. 2, DDA, New Delhi.

- 3.7** Agreement shall be drawn with successful tenderer / bidder on prescribed form. Tenderer shall quote his rates as per various terms and conditions of the tender documents, which will form part of the agreement.
- 3.8** A Pre-Bid meeting shall be held at 11:00 AM on 23.11.2009 at Chief Engineer Office for Commonwealth Games 2010, Khel Gaon, New Delhi for clarification of any doubts on contract condition and specification. Tenderers may send their queries, if any, through e-mail at cekhelgaon@dda.org.in or through letter addressed to CE(CWG) up to 4:00 PM on ...\*\*\*....
- 3.9** ----- Deleted -----
- 3.10** The bid shall be opened of the tenderers whose Earnest Money has been received in proper shape as described in 1.3 (ii).
- 3.11** The successful tenderer / agency shall be required to deposit an amount equal to 5% of the tendered value of the work as performance guarantee in the form of an irrevocable bank guarantee bond of any scheduled bank or State Bank of India in accordance with the form prescribed or in the form of Government security, fixed deposit receipt etc., as in the case of security deposit in favour of Executive Engineer, Commonwealth Games Division No.2, DDA, ...\*\*\*....., within Eight (8) days from issue of Letter of Acceptance. This period can be further extended by the Engineer-in-charge up to a maximum period of Four (4) days on written request of the contractor stating reasons for delay.
- 3.12** The competent authority on behalf of the DDA does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without assigning any reason. Tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be liable for rejection.
- 3.13** Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
- 3.14** The contractor shall not be permitted to tender for works in the DDA Zone (responsible for award and execution of contracts) in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Chief Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives of any Group A, B or C officer in the DDA Any breach of this condition by the contractor would render him liable to action under clause 3 of the agreement. In addition, he should also be liable to be debarred from tendering in future.



- 3.15** The tender for the works shall remain open for acceptance for a period of (90) Ninety days from the date of opening of tenders. If any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the DDA, then the DDA shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. The bidder must study the tender documents completely, asked for any clarifications as required at the pre-bid conference and must attach all proformas and exhibits duly filled and duly signed along with the submittal of tender documents.
- 3.16** The Notice Inviting Tender and information's / instruction to bidder shall form a part of the contract document. The successful bidder / contractor, on issue of letter of acceptance of work by the Accepting Authority, shall, within 20 days sign the contract consisting of the notice inviting tender, tender document including General condition, special condition, Bill of Quantities, drawings & particular specifications, which will be forming tender document as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
- 3.17** The Safety code shall be applicable for this work as provided in the tender document.
- 3.18** The tender document in prescribed bid forms duly completed and signed shall be submitted in a sealed cover. The sealed cover superscribed **Construction of Commonwealth Games Village for Commonwealth Games Delhi 2010 near Akshardham Temple off Road No. NH24, New Delhi, INDIA – Supply and Installation of Temporary Structure on Rental Basis at Commonwealth Games Village.** Shall be submitted by the date prescribed. Documents submitted will be treated as official record and will not be returned.
- 3.19** The agency will sign a J.V / Consortium M.O.U as per the format enclosed.
- 3.20** The contractor whose tender is accepted will also be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 5% of the tendered value of the work. The Security Deposit will be collected by deduction from the running bills of the contractor at the rate of 10% and the earnest money deposited at the time of tenders, will be treated as a part of the Security Deposit. The Security amount will also be accepted in the shape of Government Securities. Fixed Deposit Receipt of a Scheduled Bank or State bank of India will also be accepted for this purpose, provided confirmatory advice is enclosed.

**Executive Engineer  
Commonwealth Games Division No.: 2  
Delhi Development Authority**

#### **4.0 BANK GUARANTEE BOND FOR EMD**

Whereas \_\_\_\_\_ (hereinafter called "The Contractor(s)") wish to purchase the Tender for \_\_\_\_\_ (Name of work) \_\_\_\_\_ and having agreed for submission of irrevocable bank guarantee for Rs. \_\_\_\_\_ as part of earnest money as per terms of letter inviting tender we \_\_\_\_\_ (hereinafter called "The Bank") hereby undertake to pay the DDA (hereinafter called "The DDA") an amount not exceeding Rs \_\_\_\_\_ for which payment will and truly to be made to the said Delhi Development Authority on demand.

The conditions of the obligation are:

- 4.1** We.....do hereby undertake to pay the amounts due (indicate the name of the Bank) and payable under this Guarantee without any demure, merely on a demand from the Delhi development authority 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 Rs..... (Rupees.....only)
- 4.2** We, the said bank further undertake to pay to the Delhi Development Authority any money 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
- 4.3** If the Contractor(s) withdraws its Tender during the period of Tender validity specified in the Tender Form for the above work including duly extended validity period.
- 4.4** If the Contractor(s) having been notified of the acceptance of its Tender by the Delhi Development Authority during the period of Tender validity or extended validity period.
- (a) Fails or refuses to execute the Contract agreement  
(b) Fails or refuses to furnish Performance Guarantee in accordance with the conditions of Tender document.
- 4.5** This guarantee will not be discharged due to the change in the constitution of the Bank

#### **Or the Contractor(s)**

- 4.6** We .....lastly undertake not to revoke this guarantee (Indicate the name of the bank) except with the previous consent of the Delhi Development Authority in writing. and shall remain valid up to 240 days (Two Hundred and forty days ) from the date of issue of this guarantee. If any further extension of this guarantee is required, the same shall be entered to

such required period on requiring the instructions from the Delhi Development Authority.

We undertake to pay to the Delhi Development Authority up to the above amount upon receipt of its first written demand, without the Delhi development Authority having to substantiate its demand, provided that in its demand, the Delhi development Authority will note that the amount claimed by it is due to it owing to the occurrence of one or all of the above conditions, specifying the occurred condition or conditions.

**Signature of the Bank** \_\_\_\_\_

**Signature of the Witness** \_\_\_\_\_

**Name of Witness** \_\_\_\_\_

**Address of Witness** \_\_\_\_\_

## **5.0 FORM OF PERFORMANCE SECURITY (GUARANTEE)**

### **Bank Guarantee Bond**

- 5.1** In consideration of the DDA (hereinafter called “The Delhi Development Authority”) having offered to accept the terms and conditions of the proposed agreement between ----- and ----- (hereinafter called “the said Contractor(s)”) for the work ----- (hereinafter called “the said agreement”) having agreed to production of a irrevocable Bank Guarantee for Rs.----- (Rupees ----- only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and condition in the said agreement.

We, ----- (hereinafter referred as “the Bank”) hereby undertake to  
(indicate the name of the Bank)  
pay to the DDA an amount not exceeding Rs.----- (Rupees ----- only) on demand by the DDA.

- 5.2** We, ----- do hereby undertake to pay the amounts due and

(indicate the name of the Bank)  
payable under this guarantee without any demure, merely on a demand from the DDA 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 Rs.----- (Rupees ----- only).

- 5.3** We, the said bank further undertake to pay the DDA any money 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 there under and the Contractor(s) shall have no claim against us for making such payment.

- 5.4** We, ----- further agree that the guarantee herein contained shall (indicate the name of the Bank) 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 all the dues of the DDA under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of the DDA certified that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

- 5.5 We, ----- further agree with the University that the DDA (indicate the name of the Bank) shall have the fullest liberty without our consent and without affecting in any manner our obligation 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 DDA 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 being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the DDA or any indulgence by the DDA 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.
- 5.6 This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
- 5.7 We, ----- lastly undertake not to revoke this guarantee except (indicate the name of the Bank) with the previous consent of the DDA in writing.
- 5.8 This guarantee shall be valid upto ----- unless extended on demand by the DDA. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs.----- (Rupees ----- only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated the ----- day of ----- for ----- (indicate the name of the Bank).

## 6.0 ACKNOWLEDGEMENT CUM CONSENT LETTER

To

**Executive Engineer**

Commonwealth Games Division No.-2  
DDA Office Complex  
Asian Games Village Complex  
New Delhi

Telephone No.: (Fax)

**Attn.:** ..... (Name of Concerned Person)

**Name of Work:** Commonwealth Games Projects Assigned to Delhi  
Development Authority (DDA)

**Sub Head :** Design Built Maintenance and Rental Contract for  
Temporary accommodation using Tensile Fabric at  
Commonwealth Games Village

**Tender document No.**.....

Dear Sir,

We hereby acknowledge receipt of complete Tender Document along with enclosures for the subject works and understand that documents received remain property of Delhi Development Authority. We indicate below our intentions with respect to the Letter Inviting Bid.

**A)** We intend to bid as requested for the subject works and furnish following details with respect to our quoting office:

- i)** Postal Address : -----  
-----  
-----
- ii)** Telephone Number : -----
- iii)** Tele fax Number : -----
- iv)** e-mail Address : -----
- v)** Contract Person : -----

**B)** Contact person at Delhi, if any :

**i)** Postal Address : -----  
-----  
-----

**ii)** Telephone Number: -----

**iii)** Tele fax Number: -----

**iv)** E-mail Address: -----

**v)** Contact Person: -----

**Note :** Agency / contractor is requested to furnish the details mentioned at (A) and (B) above, as applicable immediately within one week from the date of receipt of Tender Document.

**(Signature of Agency / Contractor)**

## 7.0 LETTER OF SUBMISSION

**Name Of Work:** Commonwealth Games Projects Assigned to Delhi Development Authority (DDA)

**Sub Head:** Design Built Maintenance and Rental Contract for Temporary accommodation using Tensile Fabric at Commonwealth Games Village

- i) To be submitted by **15:00 Hours** on .....\*\*\*.....to Executive Engineer, Commonwealth Games Division No. 2, DDA, New Delhi, INDIA.
- ii) To be opened in presence of tenderers who may be present at 15:30 hours on \_\_\_\_\*\*\*\*\_\_\_\_ in the office of **Executive Engineer, Commonwealth Games Division No.2, DDA, New Delhi.**

Issued to -----  
Signature of officer issuing the documents -----  
Designation -----  
Date of Issue -----

### TENDER

I/ We have read and examined the Notice inviting tender, information / instruction to bidder, special condition, schedule, A, B, C, D, E & F. Specifications applicable, Drawings & Designs, General and Special Conditions, Clauses of Contract, Particular Specification, Schedule of Quantities & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the DDA within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings, conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender open for sixty (90) days from the date of opening of the financial bid of tender thereof and not to make any modifications in its terms and conditions.

Sum of Rs ..... has been deposited in cash / receipt treasury challan / deposit at call receipt of a scheduled bank / fixed deposit receipt of scheduled bank / demand draft of a scheduled bank / bank guarantee issued by a scheduled bank as earnest money. If I / we, fail to furnish the prescribed performance guarantee within prescribed period, I / we agree that the said Delhi Development Authority or his successors in office shall without prejudice to any other right or remedy, be a liberty forfeit the said earnest money absolutely. Further, if I / we fail to commence work as specified, I / we agree that Delhi Development Authority or his successors in office shall



without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely. Otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to & those in excess of that limit at the rates to be determined in accordance with the provision contained in clause 12.2 and 12.3 of the tender form. Further I / we agree that in case of forfeiture of earnest money or both Earnest Money and Performance Guarantee as aforesaid, I / we shall be debarred for participation in the re-tendering process of the work.

Further I/We agree that in case of forfeiture of earnest money or both Earnest Money & Performance Guarantee as aforesaid, I/We shall be debarred for participation in the retendering process of the work.

I/we hereby declare that I/we shall treat the tender documents drawings and other records connected with the work as secret/ confidential documents and shall not communicate information derived there from to any person other than a person to whom I/we am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

**Date -----**

**Signature of Contractor**  
**Postal Address**  
**Stamp**

**1.**     Witness:  
          Address:  
          Occupation:

**2.**     Witness:  
          Address:  
          Occupation:

## A C C E P T A N C E

The above tender (as modified by the tenderer as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the DDA for a sum of Rs.----- (**Rupees** -----)  
-----)

The letters referred to below shall form part of this contract Agreement:

a)

b)

c)

**Executive Engineer,  
(Commonwealth Games Div-2)**

### **Note:**

**DDA** - Delhi Development Authority  
**EE, CGD-II** - Engineer-in-Charge

**8.0 Index of Exhibits to be Furnished by the Successful Bidder within 20 days from the date of Award of Work**

S.No.	Exhibit No.	Details to be Furnished
1.	EXHIBIT – EA	Methodology of executing of work for approval of DDA.
2.	EXHIBIT – EB	Deployment schedule of supervisory personnel.
3.	EXHIBIT – EC	Deployment schedule of supervisory personnel. Agency / contractor shall submit this list duly filled in for all applicable disciplines. Bidder shall be required to modify this list and add any additional supervisory personnel required for the work covered under this contract
4.	EXHIBIT – ED	Deployment schedule of construction equipments including. This exhibit includes list of construction equipments for various disciplines of work. Agency / contractor shall submit this list duly filled in for all applicable disciplines. Agency / contractor shall be required to modify this list and add any additional equipment required for the work covered under this contract.
	EXHIBIT – EE	----- Deleted -----
	EXHIBIT – EF	----- Deleted -----
	EXHIBIT-EG (A)	----- Deleted -----
	EXHIBIT-EG(B)	----- Deleted -----
	EXIBIT – EH	----- Deleted -----
5.	EXHIBIT – EI	Details of PF Registration
	EXHIBIT – EJ	----- Deleted -----
6.	EXHIBIT – EK	Integrated Bar Chart
7.	EXHIBIT – EL	Design Proposal
8.	EXHIBIT-EM	Mock up sample of size 10m x 10m as per the direction of engineer in charge for approval.
	EXHIBIT-EN	----- Deleted -----

**EXHIBIT-EA**  
**(to be given phase wise)**

**SCHEDULE OF METHODOLOGY OF EXECUTION OF WORK**

The Agency / contractor shall submit the details of methodology of execution of work.

**Signature of Agency** : \_\_\_\_\_  
**Name of Agency** : \_\_\_\_\_  
**Company Seal** : \_\_\_\_\_

**EXHIBIT-EB**  
**“To Be Given Phase Wise”**

**DEPLOYMENT SCHEDULE OF SUPERVISORY PERSONNEL**

The Agency / contractor shall submit the details deployment of all supervisory personnel in the following format

S.No.	Description	WEEK-WISE DEPLOYMENT SCHEDULE																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total (Man Months)	
1.																							
2.																							
3.																							
4.																							
5.																							
6.																							
7.																							
8.																							
9.																							

Signature of Agency : \_\_\_\_\_

Name of Agency : \_\_\_\_\_

Company Seal : \_\_\_\_\_

**EXHIBIT-EC**  
**“To Be Given Phase Wise”**

**EXHIBIT FOR DEPLOYMENT SCHEDULE OF DIRECT + INDIRECT LABOUR**

		WEEK-WISE DEPLOYMENT SCHEDULE																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	Mistri/ Work Supervisor																				
2.																					
a)	For Shuttering																				
3.	Bar Bender																				
4																					
5.	Plumber																				
5.																					
6																					
7.	Unskilled Labour																				
8.	Miscellaneous																				
9.	Semi skilled Labour																				

**Note:** Agency / Contractor shall furnish the deployment schedule (in months) as per the time schedule of completion of this work.

**EXHIBIT-ED**  
**“To Be Given Phase Wise”**

**DEPLOYMENT SCHEDULE OF CONSTRUCTION EQUIPMENTS**

The Agency / Contractor shall submit the details deployment schedule of all proposed construction equipments specified in Annexure-II of Additional General Condition in the following format.

S.No.	Description of Equipment	Capacity	WEEK-WISE DEPLOYMENT SCHEDULE																				Total (Equipment / Machine Weeks)
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1.																							
2.																							
3.																							
4.																							
5.																							
6.																							
7.																							

Bidder may make additions/deletions in the equipment list as above based on his requirement

Signature of Agency : \_\_\_\_\_  
Name of Agency : \_\_\_\_\_  
Company Seal : \_\_\_\_\_

**EXHIBIT EE**





**SUB EXHIBIT – ‘EF’**

Deleted

**EXIHIBIT EG (A)**

Deleted

**EXHIBIT EG (B)**



**EXHIBIT – EH**

Deleted

**EXHIBIT - EI**

**DETAILS OF P.F. REGISTRATION**

Agency / Contractor to furnish details of Provident Fund Registration:

**PF REGISTRATION NO.** :

**DISTRICT & STATE** :

We hereby confirm that the above PF Account is under operation presently and shall be used for all PF related activities for the labour engaged by us in the present work (if awarded to us).

**Signature of Agency** : \_\_\_\_\_

**Name of Agency** : \_\_\_\_\_

**Company Seal** : \_\_\_\_\_

**EXHIBIT- EJ**

Deleted

**EXHIBIT-EK**  
**“To Be Given Phase Wise”**

**SCHEDULE OF INTEGRATED BAR CHART**

The Agency / contractor shall submit week wise details of Integrated Bar Chart of execution of work as per table below

S.No.	Description	WEEK-WISE DETIALS OF METHODOLOGY OF EXECUTION OF WORK																				Total (Man Months)
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1.																						
2.																						
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						

Signature of Agency : \_\_\_\_\_

Name of Agency : \_\_\_\_\_

Company Seal : \_\_\_\_\_

**‘EXHIBIT-EN’**

Deleted



## **9.0 GENERAL RULES & DIRECTIONS**

- 9.1** All work proposed for execution by contract will be notified to pre-qualified tenderers and signed by the officer inviting tender or by publication in News papers as the date may be.

The form of invitation to tender will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tenderer and the percentage, if any, to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.

- 9.2** In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act, 1952.

- 9.3** Receipts for payment made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the same of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.

- 9.4** Any person who submits a tender shall fill up the required Schedule, stating at what Lump Sum price/rates he is willing to undertake the work. Tenders, which propose any alternation in the work specified in the Tender documents issued to the Contractors, said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort, will be liable to rejection. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelops.

The rate(s) and/or amount(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paisa or less and considering more than fifty paisa as rupee one.

- 9.5** The officer inviting tender or his duty authorised assistant, will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amount of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money forwarded therewith shall thereupon for the purpose of identification sign copies of the specifications and other documents mentioned in Rule-I. In the event of tender being rejected, the earnest money forwarded with such unaccepted tender shall thereupon be returned to the contractor remitting the same, without any interest.

- 9.6** The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
- 9.7** The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgement or payment to the officer inviting tender and the contractors shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or a duly authorised Cashier.
- 9.8** The memorandum of work tendered for and the schedule of materials to be supplied by the department and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is issued. If a form is issued to an intending tenderer without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.
- 9.10** The tenderers shall sign a declaration under the officials Secret Act, 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them. The unsuccessful tenderers shall return all the drawings given to them.
- 9.11** ----- Deleted -----
- 9.12** In the case of any tender where unit rate of any item/items appear unrealistic, such tender will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation such a tender is liable to be disqualified and rejected.
- 9.13** (i) The Contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five percent) of the tendered amount within specified period. This guarantee shall be in form of Govt. Securities or fixed deposit receipt of any scheduled bank, guarantee bonds of any scheduled bank or State Bank of India.
- (ii) The Contractor whose tender is accepted, will also be required to of Security Deposit for the fulfillment of his contract, an amount equal to 5% of the tendered value of the work. The Security deposit will be collected by deductions from the running bills of the contractor at the rates mentioned in clause-1A and the earnest money if deposited in cash at the time of tenders, will be treated as a part of the Security Deposit. The Security amount will also be accepted in cash or in the shape of Government Securities. Fixed Deposit Receipt of a Scheduled Bank or State Bank of India will also be accepted for this purpose provided confirmatory advice is enclosed.
- 9.14** On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated in writing to the Engineer-in-Charge.

- 9.15** Service tax on works contract, VAT Tax, purchase tax, turnover tax, labour cess or any other tax or excise duty on materials / works in respect of this contract shall be payable by the contractor and Government will not entertain any claim whatsoever in respect of the same.
- 9.16** The contractor shall give a list of both gazetted and non-gazetted CPWD employees related to him.
- 9.17** The tender for the work shall not be witnessed by a contractor or contractors who himself/themselves has/have tendered or who may and has/have tendered for the same work. Failure to observe this conditions would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.
- 9.18** The contractor shall submit list of works which are in hand (progress) in the following form:

Name of work	Brief details of the work	Name & Particulars of the client Agency where the work is being executed	Value of work	Position of work in progress	Remarks
1.	2.	3.	4.	5.	6.

- 
- 9.19** The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Superintending Engineer/Executive Engineer may in his discretion without prejudice to any other right or remedy available in law cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

## 10.0 CONDITIONS OF CONTRACT

### Information / Instruction for the Bidders / Tenderers for Compliance

10.1 ----- Deleted -----

10.2 ----- Deleted -----

10.3 ----- Deleted -----

## 10.4 Definitions

In this document the following words and expressions have the meaning hereby assigned to them:

**“1 Lac”** means 1,00,000/-.

**“Accepting Authority”** Chief Engineer (CWG) / Works Advisory Board

**“Bidder / Applicant / Tenderer / Respondent / Contractor”** means the individual, proprietary firm, firm in partnership, limited company – Private or Public or Corporation. Who submit his bid / offer.

**“Bill of Quantities (BOQ)”** means the price tables with item wise description included in this document.

**“Bump-in”** means the installation of temporary structures and associated works.

**“Bump-out”** means the removal of temporary structures and associated works.

**“Business Day”** means a day on which banks are open for general banking business in Delhi, not being a Sunday. This term is only relevant for the serving of notices, issues relating to payments and in determining how a labour-based variation is to be regarded. See “Working Day”.

**“Commonwealth Games”** means the XIX Commonwealth Games to be held principally in Delhi and currently proposed to take place from 3<sup>rd</sup> October 2010.

**“Confidential Information”** means the terms and conditions of this RFP and all other documents, information, know-how and data, in any form, and in any media relating to or concerning Commonwealth Games Delhi 2010 or connected with the staging of the Commonwealth Games in any media which is marked “Confidential” or, would reasonably be regarded as confidential, including:

(a) Strategies, projects, policies and business plans;

(b) Financial information;

(c) Marketing and advertising concepts, plans and materials; and

(d) Drawings, designs, models, plans, trade marks and logos, but excluding information which:

(i) Is in or comes into the public domain otherwise than as a result of a breach of this Agreement; or

(ii) At the time of first disclosure to or observation by the bidder was already in the bidders's lawful possession in written form.

**“Contract Form”** means Tender document.

**“Contractor”** means the successful entity that is appointed by DDA and who enters into a Works Agreement with DDA to provide the Works.

**“DDA”** means the Delhi Development Authority.

**“Department”** means DDA.

**“Employer”** means the DDA through Engineer in-charge CGD II, DDA, Delhi.

**“Engineer-in-Charge”** means Executive Engineer/CGD-2, DDA.

**“Exclusive Use”** means the grant of sole management control to DDA at a Venue; wherefore DDA has the authority to grant access to a Venue as it sees fit to enable it to stage the Games, and the responsibility to execute the relevant Venue Use Agreement.

**“Exclusive Use Period”** means the time when DDA has Exclusive Use at a Venue. This varies from Venue to Venue.

**“Field of Play (FOP)”** means the area or space in which Games athletes compete in.

**“Fitout Period”** means the period from the start to the end of fitout activities such as site mobilisation, delivery of goods to a Venue, installation and commissioning of goods by DDA's Contractors and staff. This often coincides with the period from the start of Exclusive Use to the end of Bump-in.

**“Games”** means the XIX Commonwealth Games to be held in Delhi and currently proposed to take place from 3<sup>rd</sup> October.

**“Games Time”** means the period during which the Games take place, commencing with the first event of the Games and expiring on the completion of the final event of the Games.

**“JVC”** means Joint Venture Contract.

**“Key Milestone”** means a key date or objective specified in the document as being integral to the timely completion of the Works.

**“Laws”** means the requirements of all statutes, rules, regulations, proclamations, ordinances or by-laws present or future, including without limitation, the Commonwealth Games (Arrangements) Act as amended from time to time.

**“Marquees”** means Temporary Structure to be build by Bidder, & be removed after completion of games.

**“Move-in”** means the occupation of a Venue by Organising Committee Delhi 2010 workforce.

**“Move-out”** means the departure of Organising Committee Delhi 2010 workforce from a Venue.

**“Non-exclusive Use”** means the grant of limited use and/ or access to DDA by the Normal Operating Mode venue operator of a Venue. All activities proposed by DDA will be subject to the approval of the Normal Operating Mode venue operator prior to commencement on site.

**“Non-exclusive Use Period”** means the time when DDA has Non-Exclusive Use at a Venue. This varies from Venue to Venue.

**“Normal Operations Mode”** means the mode in which a Venue normally operates; controlled by existing venue operators and uninfluenced by any Games activities.

**“Organising Committee Delhi 2010 (OC)”** means the central organization in charge of conducting the Commonwealth Games in Delhi. The OC reserves all the rights to determine games time operations & can also reasonably influence the planning at any stage to accommodate any such games time requirement.

**“Proposal”** means a proposal by the bidder in response to this document and any subsequent clarifications.

**“Public Announcements”** means any release, comment, provision or disclosure of any information to any media entity or anyone engaged in the provision of information to the public.

**“Reinstatement Period”** means the period from the start to the end of, removal and reinstatement/ rectification activities such as site demobilisation, decommissioning, removal of goods by Contractor from a Venue and reinstatement of Venues to their original states (excluding fair wear and tear). This often coincides with the period from the start of Bump-out to the end of the Exclusive Use Period.

**“Rs.”** means – Indian Rupess

**“Scope of Works”** means the document that sets out the background information on DDA, the purpose of the document and describes in detail the Works (to be provided to DDA by the successful bidder).

**“Statement of Compliance”** means the statement to be completed and executed by the Respondent.

**“Taxes”** means goods and services tax, all group tax, Custom Duties, VAT or other taxes, or withholding which is levied or imposed by a governmental authority in India & Delhi, or otherwise, and any related interest, penalty, fine and other statutory charge.

**“Venue”** means the competition, non-competition or other venues or locations to be utilised in connection with the Games and related events which require Accreditation

or a Games Ticket for access. A Venue is usually part of a Precinct , which can be a building or a collection of buildings.

**“Venue Use Agreement (VUA)”** means the agreement governing the lease conditions of a Venue for the staging of the Games between Organising Committee Delhi 2010 and the Normal Operations Mode venue proprietor/ operator.

**“Working Day”** means any calendar day where work is required to be carried out by the Contractor to deliver the Scope of Works in accordance with the agreed Works Schedule in the Works Agreement.

**“Works”** means the provision of the goods and services to DDA as set out in the Scope of Works.

**“Works Agreement or Agreement”** means the agreement and its schedules for the provision of agreed goods and services to be entered into between DDA and the successful bidder as set out in Part C of this RFP and any subsequent authorised amendments.

**“Works Period”** means the period from the start of the Fitout Period to the end of the Reinstatement Period, except the period between Move-in and Move-out.

**“Works Schedule”** means the timeline and process for delivery of the Works as specified in this document

**“Year”** means Financial Year.

*Where applicable, singular and plural versions of a term have the same underlying meaning.*

#### **10.5 Site Visit**

The applicant is advised to visit the site of work at his own cost and examine the site of work and its surroundings to collect all information that he / she considers necessary for proper assessment of the prospective assignment.

**10.6** On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated in writing to the Engineer-in-Charge.

**10.7** The contractor shall give a list of both gazetted and non-gazetted DDA employees related to him.

**10.8** The tender for the work shall not be witnessed by a contractor or contractors who himself/ themselves has/ have tendered or who may has/ have tendered for the same work. Failure to observe this condition would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.

**10.9** The Engineer-in-Charge inviting tender or his duly authorized representatives will open tenders in the presence of any intending contractor who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money forwarded at the time of purchase of tender shall thereupon be given to the contractor who shall thereupon for the purpose of identification sign copies of the specifications and other documents. In the event of a tender being rejected, the earnest money of unaccepted tenders shall thereupon be returned to the contractor, without any interest.

**10.10** General Arrangement Drawings, Detailed Structural Design, Drawing and Shop Drawings shall be got proof checked by the contractor from Indian Institute of Technology.

**Note:-** Detailed Design Calculation, Structural Drawing, General Arrangement Drawings duly proof checked by the approved design structural consultant by DDA are to be furnished by the agency within 20 days from the date of award of the work.

**10.11** The competent authority on behalf of DDA reserves to himself the right of accepting the whole or any part of the tender and the bidder shall be bound to perform the same at the rate quoted.

**10.12** Any person who submits a tender shall fill up the Bill of Quantity,, stating at what rate he is willing to undertake each item of the work. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort, including conditional rebates, will be liable for rejection.

The rate(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.

**10.13** The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgement or payment to the officer inviting tender and the contractor shall be responsible for seeing that he procures a receipt signed by the officer inviting tender or a duly authorized Cashier.

**10.14** The bidders shall sign a declaration under the officials Secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them.

**10.15** Only rates quoted shall be considered. Any tender containing percentage below/ above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does



not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount. In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the contractor has included the cost of this/these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.

- 10.16** In the case of any tender where unit rate of any item/ items appear unrealistic, such tender will be considered as unbalanced and in case the bidder is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.
- 10.17** All rates shall be quoted on the tender form (i.e. Schedule of Quantities) . The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs.2.15 P' and in case of words, the word, 'Rupees' should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be upto two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.
- 10.18** Service Tax, Sales Tax VAT on works contract, purchase tax, turnover tax or any other tax on material / works in respect of this contract shall be payable by the Contractor and DDA will not entertain any claim whatsoever in respect of the same.
- 10.19** The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the DDA may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.
- 10.20** Jurisdiction of court for settlement of any dispute beyond Arbitration shall be Delhi / New Delhi only.

## **11.0 CLAUSES OF CONTRACT**

### **11.1 Clause-1**

#### ***Performance Guarantee***

i) The Contractor shall submit an irrevocable Performance Guarantee of 5% (Five percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance. This period can be further extended by the Engineer-in-Charge upto a maximum period as specified in schedule 'F' on written request of the contractor stating the reasons for delay in procuring the Bank Guarantee to the satisfaction of the Engineer-in-Charge. This guarantee shall be in the form of Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the form annexed hereto. In case a fixed deposit receipt of any Bank is furnished by the contractor to the DDA as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the DDA to make good the deficit.

ii) The Performance Guarantee shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest.

iii) The Engineer-in-Charge shall not make a claim under the performance guarantee except for amounts to which the DDA is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of :

a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee.

b) Failure by the contractor to pay DDA any amount due, either as agreed by the contractor or determined under any of the Clauses/ Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in-Charge.

iv) In the event of the contract being determined or rescinded under provision of any of the Clause/ Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the DDA

## 11.2 Clause 1A

### *Recovery of Security Deposit*

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit DDA at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 10% of the gross amount of each running bill till the sum alongwith the sum already deposited as earnest money, will amount to security deposit of 5% of the tendered value of the work. Such deductions will be made and held by DDA by way of Security Deposit unless he/they has/have deposited the amount of Security at the rate mentioned above in the form of Government Securities or fixed deposit receipts. In case a fixed deposit receipt of any Bank is furnished by the contractor to the DDA as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the DDA to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due to or may become due to the contractor by DDA on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Banks or Government Securities (if deposited for more than 12 months) endorsed in favour of the DDA, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills of the contractor at the rates mentioned above and the Earnest money deposited at the time of purchase of tenders will be treated a part of the Security Deposit.

The security deposit as deducted above can be released against bank guarantee issued by a scheduled bank, on its accumulations to a minimum of Rs.5 lakh subject to the condition that amount of such bank guarantee, except last one, shall not be less than Rs. 5 lakh

**Note-1 : Government** papers tendered as security will be taken at 5% (five percent) below its market price or at its face value, whichever is less. The market price of **Government** paper would be ascertained by the Divisional Officer at the time of collection of interest and the amount of interest to the extent of deficiency in value of the **Government** paper will be withheld if necessary.

**Note-2 :** Government Securities will include all forms of Securities mentioned in rule No.274 of the G.F. Rules except fidelity bond. This will be subject to the observance of the condition mentioned under the rule against each form of security.

**Note-3 :** Note 1 & 2 above shall be applicable for both clause 1 and 1A.

### **11.3 Clause 2**

#### ***Compensation for Delay***

If the contractor fails to maintain the required progress in terms of clause 5 or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the DDA on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the Superintending Engineer (whose decision in writing shall be final & binding) may decide on the amount of tendered value of the work for every completed day/month (as applicable) that the progress remains below that specified in Clause 5 or that the work remains incomplete.

This will also apply to items or group of items for which a separate period of completion has been specified.

- |    |                                   |   |
|----|-----------------------------------|---|
| i) | Compensation<br>for delay of work | @ 1.5 per month of delay to be<br>computed on per day basis |
|----|-----------------------------------|---|

Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% of the Tendered Value of work or of the Tendered Value of the item or group of items of work for which a separate period of completion is originally given.

The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the DDA. In case, the contractor does not achieve a particular milestone mentioned in schedule F, or the re-scheduled milestone(s) in terms of Clause 5.4, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of Extension of Time. With holding of amount on failure to achieve a milestone, shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.

### **11.4 Clause 2A**

#### ***Incentive for early completion***

In case, the contractor completes the work ahead of scheduled completion time, a bonus @ 1% (one percent) of the tendered value per month computed shall be payable to the contractor, subject to a maximum limit of 5% (five percent) of the tendered value. The amount of bonus, if payable, shall be paid along with final bill after completion of work. Provided always that provision of the Clause 2A shall be applicable only when so provided in 'Schedule F'. Bonus shall not be payable if the work is completed after the stipulated date of completion even if extension of time is granted without levy of compensation.

### 11.5 Clause 3

#### ***When Contract can be Determined***

Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases :

- i) If the contractor having been given by the Engineer-in-charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workman like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- ii) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- iii) If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer-in-charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer-in-Charge.
- iv) If the contractor persistently neglects to carry out his obligations under the contract and/or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him behalf by the Engineer-in-Charge.
- vi) If the contractor commits any acts mentioned in Clause 21 hereof.
- vii) If the work is not started by the contractor within 1/8<sup>th</sup> of the stipulated time.

When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the DDA shall have powers:

- a) To determine or rescind the contract as aforesaid (of which termination or rescission notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination or rescission, the Earnest Money Deposit, Security Deposit already recovered and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the DDA.

b) After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined or rescinded as above, shall not be allowed to participate in the tendering process for the balance work.

In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

#### 11.6 Clause 3A

----- Deleted -----

#### 11.7 Clause 4

##### ***Contractor liable to pay Compensation even if action not taken under Clause 3***

In any case in which any of the powers conferred upon the Engineer-in-Charge by Clause-3 thereof, shall have become exercisable and the same are not exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer-in-Charge putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession of (or at the sole discretion of the Engineer-in-Charge which shall be final and binding on the contractor) use as on hire (the amount of the hire money being also in the final determination of the Engineer-in-Charge) all or any tools, plant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor and intended to be used for the execution of the work/or any part thereof, paying or allowing for the same in account at the contract rates, or, in the case of these not being applicable, at current market rates to be certified by the Engineer-in-Charge, whose certificate thereof shall be final, and binding on the contractor, clerk of the works, foreman or other authorized agent to remove such tools, plant, materials, or stores from the premises (within a time to be specified in such notice) in the event of the contractor failing to comply with any such requisition, the Engineer-in-Charge may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and his risk in all respects and the certificate of the Engineer-in-Charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.

## **11.8 Clause 5**

### ***Time and Extension for Delay***

The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time period as mentioned in letter of acceptance or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, DDA shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee absolutely.

**11.8.1** As soon as possible after the Contract is concluded the Contractor shall submit a Time and Progress Chart for each milestone and get it approved by the Engineer-in-Charge. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per milestones given in Schedule 'F').

**11.8.2** If the work(s) be delayed by:

- i) force Majeure, or
- ii) abnormally bad weather, or
- iii) serious loss or damage by fire, or
- iv) civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
- v) delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract, or
- vi) non-availability of stores, which are the responsibility of DDA to supply or
- vii) non-availability or break down of tools and Plant to be supplied or supplied by DDA or
- viii) any other cause which, in the absolute discretion of the authority mentioned in Schedule 'F' is beyond the Contractor's control.

Then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.

**11.8.3** Request for rescheduling of Milestones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form. The

Contractor may also, if practicable, indicate in such a request the period for which extension is desired.

- 11.8.4** In any such case the authority mentioned in Schedule 'F' may give a fair and reasonable extension of time and reschedule the milestones for completion of work. Such extension shall be communicated to the Contractor by the Engineer-in-Charge in writing, within 3 months of the date of receipt of such request. Non application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-Charge and this shall be binding on the contractor.

## **11.9 Clause 6**

### ***Measurements of Work Done***

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement the value in accordance with the contract of work done.

All measurements and levels shall be taken by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be typed by contractor and checked by Engineer-in-Charge jointly with contractor signed and dated by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties. These accepted measurements shall be recorded in the measurement sheets in the format approved by Engineer-in-Charge. Each measurement sheet shall be signed by the authorized signatory of the contractor and signed by the authorized representative of the Engineer-in-Charge. Only these typed/ recorded and duly signed measurements in the RA/ Final bills shall be accepted as final measurements.

If for any reason the contractor or his authorized representative is not available and the work of checking measurements is suspended by the Engineer-in-Charge or his representative, the Engineer-in-Charge shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to check objection within a week from the date of the measurement, then such measurements recorded/checked in his absence by the Engineer-in-Charge or his representative shall be deemed to be accepted by the Contractor.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case



of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available is available then a mutually agreed method shall be followed.

The contractor shall give not less than seven days notice to the Engineer-in-Charge or his authorized representative in-charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-Charge or his authorized representative in-charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer-in-Charge's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that recording of measurements of any item of work in the RA Bill and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

The Contractor will submit the bill in six copies in approved proforma to the Engineer-in-Charge. The bill shall constitute Measurement sheets, Abstract & Memorandum of payments, Secured Advance statement, Recovery statement, Deviation statement, Cement consumption/ Stock statement, Steel stock statement, Part rate statement and other documents such as challans for supply of materials, etc. These shall be computer typed in six sets on A3 size paper. These will be serially numbered. The six copies shall be marked as Original/ Duplicate (Accounts copy), Triplicate (Certified/ Corrected Engineer-in-Charge copy), Quadruplicate (Certified/ Corrected contractor's copy) and Quintuplicate (Engineer-in-Charge copy). The contractor along with the hard copies shall also furnish a floppy / CD of the bill for record.

#### **11.10 Clause 7**

##### ***Payment on Intermediate Certificate to be regarded as Advances***

The interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements giving abstract and detailed measurements on the format approved by the Engineer-in-Charge

in six copies on or before the date of every month fixed for the same by the Engineer-in-Charge. The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule 'F', in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved. Engineer-in-Charge shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, Engineer-in-Charge shall prepare or cause to be prepared such bills in which event no claims whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer-in-Charge certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer-in-Charge. The amount admissible shall be paid by 15<sup>th</sup> working day after the day of presentation of the bill by the Contractor to the Engineer-in-Charge with the account of the material issued by the department, or dismantled materials if any.

All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-Charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer-in-Charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the department to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.

The Engineer-in-Charge in his sole discretion on the basis of a certificate from to the effect that the work has been completed upto the level in question make interim advance payments without detailed measurements for work done in foundation by working out at 75% of the assessed value. The advance payments so allowed shall be adjusted in the subsequent interim bill by taking detailed measurements thereof.

### **11.11 Clause 8**

#### ***Completion Certificate and Completion Plans***

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, door, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution thereof, and not until the work shall have been measured by the Engineer-in-Charge. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

### **11.12 Clause 8A**

#### ***Contractor to keep Site Clean***

When the annual repairs and maintenance of works are carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floor, windows, etc. shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done without waiting for the actual completion of all the other items of work in the contract. In case the contractor fails to comply with the requirements of this clause, the Engineer-in-Charge shall have the right to get this work done at the cost of the contractor wither departmentally or through any other agency. Before taking such action, the Engineer-in-Charge shall give ten days notice in writing to the contractor.

### **11.13 Clause 8B**

#### ***Completion Plans to be Submitted by the Contractor***

The contractor shall submit completion plans/ drawings showing therein the modifications and corrections made during the course of execution alongwith the letter intimating that the works have been completed.

Detailed as built drawings for the works in respect of electrical, internal sanitary, internal water supply, Fire fighting and external services or any other works carried out by the contractor.

Certificates of satisfactory performance test carried out for the various works.

Guarantee/ Operation & Maintenance Manual shall be supplied by the vendor.

In case, the contractor fails to submit the completion documents/ drawings as aforesaid, he shall be liable to pay a sum of Rs.50,000/- or actual expenses incurred on account of preparation of such completion Drawings, whichever is more. The decision of Engineer-in-Charge shall be final and binding on the contractor.

#### **11.14 Clause 9**

##### ***Payment of Final Bill***

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-Charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-Charge, will, as far as possible be made within the period of six months, the period being reckoned from the date of receipt of the bill by the Engineer-in-Charge or his authorized representative.

#### **11.15 Clause 9A**

##### ***Payment of Contractor's Bills to Banks***

Payments due to the contractor may, if so desired by him, be made to his bank, registered financial, co-operative or thrift societies or recognized financial institutions instead of direct to him provided that the contractor furnishes to the Engineer-in-Charge (1) an authorization in the form of a legally valid document such as a power of attorney conferring authority on the bank; registered financial, co-operative or thrift societies or recognized financial institutions to receive payments and (2) his own acceptance of the correctness of the amount made out as being due to him by DDA or his signature on the bill or other claim preferred against DDA before settlement by the Engineer-in-Charge of the account or claim by payment to the bank, registered financial, co-operative or thrift societies or recognized financial institutions. While the receipt given by such banks; registered financial, co-operative or thrift societies or recognized financial institutions shall constitute a full and sufficient discharge for the payment, the contractor shall whenever possible present his bills duly receipted and discharged through his bank, registered financial, co-operative or thrift societies or recognized financial institutions.

Nothing herein contained shall operate to create in favour of the bank; registered financial, co-operative or thrift societies or recognized financial institutions any rights or equities vis-à-vis the DDA.

**11.16 Clause 10**

***Materials supplied by DDA***

-----DELETED-----

**11.17 Clause 10A**

***Materials to be provided by the Contractor***

The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the DDA.

The contractor shall, at his own expense and without delay, supply to the Engineer-in-Charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the Contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in-Charge furnish proof, to the satisfaction of the Engineer-in-Charge that the materials so comply. The Engineer-in-Charge shall within thirty days of supply of samples or within such further period as he may require intimate to the Contractor in writing whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the Engineer-in-Charge for his approval fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specifications, approval of the Engineer-in-Charge shall be issued after the test results are received.

The Contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by the Engineer-in-Charge. The Contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-Charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in-Charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-in-Charge or his authorized representative shall at all times have access to the works and to all workshops and places where work is being prepared or 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.

The Engineer-in-Charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-in-Charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-Charge shall also have full

powers to require other proper materials to be substituted thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the Contractor.

**11.18 Clause 10B**

----- DELETED -----

**11.19 Clause 10C**

*Payment on Account of Increase in Prices/ Wages due to Statutory Order(s)*

----- DELETED -----

**11.20 Clause 10CA**

----- DELETED -----

**11.21 Clause 10CC**

*Payment due to Increase/Decrease in Prices/Wages after Receipt of Tender for Works*

-----DELETED-----

**11.22 Clause 10D**

*Dismantled Material DDA Property*

-----DELETED-----

**11.23 Clause 11**

*Work to be Executed in Accordance with Specifications, Drawings, Orders etc.*

The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer-in-Charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications of Central Public Works Department specified in Schedule 'F' or in any Bureau of Indian Standard or any other, published standard or code or, Schedule of Rates of any other printed publication referred to elsewhere in the contract.

The contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

## **11.24 Clause 12**

### ***Deviations/Variations Extent and Pricing***

The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

**11.24.1** The time for the completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows:

- i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus
- ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

### **11.24.2 Deviation / Extra Items and Pricing**

In the case of extra item(s) the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis, for the work and the engineer-in-charge shall within one month of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

In the case of substituted items, the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the aforesaid para.

### **11.24.3 Deviation / Substituted Items, Pricing**

- a) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted) the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).
- b) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted) the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to

be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

#### **11.24.4 Deviation, Deviated Quantities, Pricing**

In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in schedule F, the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis, for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities the Engineer-in-Charge shall within one month of receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

**11.24.5** The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Schedule F, and the Engineer-in-Charge shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration and reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.

**11.24.6** The contractor shall send to the Engineer-in-Charge once every three months an upto date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Engineer-in-Charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Engineer in Charge may authorize consideration of such claims on merits.

**11.24.7** For the purpose of operation of Schedule F, the following works shall be treated as works relating to foundation :

- i)** For buildings, compound walls upto plinth level or 1.2 meters (4 feet) above ground level whichever is lower excluding items of flooring and D.P.C. but including base concrete below the floors.
- ii)** For abutments, piers, retaining walls of culverts and bridges, walls of water reservoirs the bed of floor level.
- iii)** For retaining walls where floor level is not determinate 1.2 meters above the average ground level or bed level.
- iv)** For sewer line/water lines all items of excavation and filling including treatment of sub-base.



**11.24.8** Any operation incidental to or necessarily has to be in contemplation of bidder while filling tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the bidder or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

**11.25 Clause 13**

***Foreclosure of Contract due to Abandonment or Reduction in Scope of work***

If at any time after acceptance of the tender, DDA shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Engineer-in-Charge shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer-in-Charge for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the foreclosure:

- i) Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks.
- ii) DDA shall have to option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work) provided, however, DDA shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by DDA, cost of such materials as detailed by Engineer-in-Charge shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.
- iii) If any materials supplied by DDA are rendered surplus, the same except normal wastage shall be returned by the contractor to DDA at rates not exceeding those at which these were originally issued less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition, cost of transporting such materials from site to DDA stores, if so required by DDA, shall be paid.

iv) Reasonable compensation for transfer of T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.

v) Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary.

The contractor shall, if required by the Engineer-in-Charge furnish to him books of account, wage books time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition.

The reasonable amount of items on (i), (iv) and (v) above shall not be in excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by the DDA as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, the Engineer-in-Charge shall be entitled to recover or be credited with any outstanding balances due from the contractor for advance paid in respect of any tool, plants and materials and any other sums which at the date of termination were recoverable by the DDA from the contractor under the terms of the contract.

#### 11.26. Clause 14

----- DELETED -----

#### 11.27. Clause 15

##### *Suspension of Work*

i) The contractor shall, on receipt of the order in writing of the Engineer-in-Charge, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in-Charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons :

- a) On account of any default on the part of the contractor or;
  - b) For proper execution of the works or part thereof for reasons other than the default of the contractor; or
- c) For safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-Charge.

ii) If the suspension is ordered is ordered for reasons (b) and (c) in sub-para (i) above:

a) the contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25%, for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and;

b) If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Engineer-in-Charge may consider reasonable in respect of salaries and/or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor. Provided the contractor submits his claim supported by details to the Engineer-in-Charge within fifteen days of the expiry of the period of 30 days.

- iii) If the works or part thereof is suspended on the orders of the Engineer-in-Charge for more than three months at a time, except when suspension is ordered for reason (a) in sub-para (i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-Charge requiring permission within fifteen days from receipt by the Engineer-in-Charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by DDA or where it affects whole of the works, as an abandonment of the works by DDA, shall within ten days of expiry of such period of 15 days given notice in writing of his intention to the Engineer-in-Charge. In the event of the contractor treating the suspension as an abandonment of the contract by DDA, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in-Charge may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within 30 days of the expiry of the period of 3 months.

Provided, further, that the contractor shall not be entitled to claim any compensation from DDA for the loss suffered by him on account of delay by DDA in the supply of materials in schedule 'B' where such delay is covered by difficulties relating to the supply of wagons, force Majeure including non-allotment of such materials by

controlling authorities, acts of Govt, acts of enemies of the state/country or any reasonable cause beyond the control of the DDA.

#### **11.28 Clause 16**

##### ***Action in case Work not done as per Specifications***

All works under or in course of execution or executed in pursuance of the contract shall at all times be open and accessible to the inspection and supervision of the Engineer-in-Charge, his authorized Representative of the work and all the superior officers, Officers from Quality Assurance team of DDA, Third party Quality Assurance team and officers of the Chief Technical Examiner's Office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as is they had been given to the contractor himself.

If it shall appear to the Engineer-in-Charge or his authorized subordinates in-charge of the work or to the Third-Party Quality Assurance team or to the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract the contractor shall, on demand in writing which shall be made within six months of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract (for non-completion of the work in time) for this default.

In such case the Engineer-in-Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the competent authority may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in-Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

### 11.29. Clause 17

#### ***Contractor Liable for Damages, defects during maintenance period***

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within six months (three months in the case of work costing Rs. Ten lakhs and below accept road work) after a certificate final or otherwise of its completion shall have been given by the Engineer-in-Charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-Charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later. Provided that in the case of road work if in the opinion of the Engineer-in-Charge, half of the security deposit is sufficient, to meet all liabilities of the contractor under this contract, half of the security deposit will be refundable after six months and the remaining half after twelve months of the issue of the said certificate of completion or till the final bill has been prepared and passed whichever is later.

In case of Maintenance and Operation works of E&M services, the security deposit deducted from contractors shall be refunded within one month from the date of final payment or within one month from the date of completion of the maintenance contract which ever is earlier.

### 11.30. Clause 18

#### ***Contractor to Supply Tools & Plants etc.***

The contractor shall provide at his own cost all materials (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-Charge's stores), plant, tools, appliances, implements, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing the same may be provided by the Engineer-in-Charge at the expense of the contractor and the expenses may be deducted, from any

money due to the contractor, under this contract or otherwise and/or from his security deposit or the proceeds of sale thereof, or a sufficient portions thereof.

#### **11.31 Clause 18A**

##### ***Recovery of Compensation paid to Workmen***

In every case in which by virtue of the provisions sub-section (1) of Section 12, of the Workmen's Compensation Act, 1923, DDA is obliged to pay compensation to a workman employed by the contractor, in execution of the works, DDA will recover from the contractor, the amount of the compensation so paid; and, without prejudice to the rights of the DDA under sub-section (2) of Section 12, of the said Act, DDA shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by DDA to the contractor whether under this contract or otherwise. DDA shall not be bound to contest any claim made against it under sub-section (1) Section 12, of the said Act, except on the written request of the contractor and upon his giving to DDA full security for all costs for which DDA might become liable in consequence in contesting such claim.

#### **11.32 Clause 18B**

##### ***Ensuring Payment and Amenities to Workers if Contractor fails***

In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, DDA is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules under Clause 19H or under the Contractor's Labour Regulations, or under the Rules framed by DDA from time to time for the protection of health and sanitary arrangements for workers employed by DDA. Contractors, DDA will recover from the contractor, the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to the rights of the DDA under sub-section (2) of Section 20, and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, DDA shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by DDA to the contractor whether under this contract or otherwise DDA shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of Section 21, of the said Act, except on the written request of the contractor and upon his giving to the DDA full security for all costs for which DDA might become liable in contesting such claim.

#### **11.33 Clause 19**

##### ***Labour Laws to be complied by the Contractor***

The contractor shall obtain a valid license under the Contract Labour (R&A) Act 1970, and the Contract Labour (Regulation and Abolition) Central Rules 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.

Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

**11.34 Clause 19A**

No labour below the age of fourteen years shall be employed on the work.

**11.35 Clause 19B**

***Payment of Wages***

Payment of wages :

- i) The contractor shall pay to labour employed by him either directly or through sub-contractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.
- ii) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.
- iii) In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the Central Public Works Department contractor's Labour Regulations made by Government from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions un-authorizedly made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.
- iv) a) The Engineer-in-Charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.

b) Under the provision of Minimum Wages (Central) Rules 1950, the contractor is bound to allow to the labours directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.

In the case of Union Territory of Delhi, however, as the all inclusive minimum daily wages fixed under Notification of the Delhi Administration No.F.12(162)MWO/DAB/43884-91, dated 31.12.1979 as amended from time to time are inclusive of wages for the weekly day of rest, the question of extra payment for weekly holiday would not arise.

v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits the modifications thereof or any other laws relating thereto and the rules made there under from time to time.

vi) The contractor shall indemnify and keep indemnified DDA against payments to be made under and for the observance of the laws aforesaid and the Contractor's Labour Regulations without prejudice to his right to claim indemnify from his sub-contractors.

vii) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.

viii) Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.

ix) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

#### 11.36 Clause 19C

##### ***Penalty for each default to provide facilities:-***

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety provisions as per Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay a penalty of Rs.200/- for each default and in addition the Engineer-in-Charge shall be at



liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

**11.37 Clause 19D (Statement of staff employed by Contrator)**

The contractor shall submit by the 4<sup>th</sup> and 19<sup>th</sup> of every month, to the Engineer-in-Charge a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively :

- 1) The number of labourers employed by him on the work.
- 2) Their working hours
- 3) The wages paid to them
- 4) The accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them, and
- 5) The number of female workers who have been allowed maternity benefit according to Clause 19F and the amount paid to them.

Failing which the contractor shall be liable to pay to DDA, a sum not exceeding Rs.200/- for each default or materially incorrect statement. The decision of the Engineer in charge shall be final in deducting from any bill due to the contractor the amount levied as fine and be binding on the contractor.

**11.38 Clause 19E**

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by DDA from time to time for the protection of health and sanitary arrangements for workers employed by the DDA and its contractors.

**11.39 Clause 19F**

Leave and pay during leave shall be regulated as follows :

**1. Leave**

- i) In the case of delivery – maternity leave not exceeding 8 weeks, 4 weeks upto and including to day of delivery and 4 weeks following that day,
- ii) In the case of miscarriage – upto 3 weeks from the date of miscarriage.

**2. Pay**

- i) In the case of delivery – leave pay during maternity leave will be at the rate of the women's average daily earnings, calculated on total wages earned on the days when full time work was done during a period of three months immediately preceding the date on which she given notice that she expects to be confined or at the rate of Rupee one only a day whichever is greater.

- ii) In the case of miscarriage – leave pay at the rate of average daily earning calculated on the total wages earned on the days when full time work was done during a period of three months immediately preceding the date of such miscarriage.

**3. Conditions for the grant of Maternity Leave :**

No maternity leave benefit shall be admissible to a woman unless she has been employed for a total period of not less than six months immediately preceding the date on which she proceeds on leave.

4. The contractor shall maintain a register of Maternity (Benefit) in the Prescribed Form as shown in annexure-I and II, and the same shall be kept at the place of work.

**11.40 Clause 19G (MODEL RULES)**

In the event of the contractor(s) committing a default or breach of any of the provisions of the, Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the workers as amended from time to time or furnishing any information or submitting or filing and statement under the provisions of the above Regulations and Rules which is materially incorrect, he/they shall, without prejudice to any other liability, pay to the DDA a sum not exceeding Rs.200/- for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractor(s) defaulting continuously in this respect, the penalty may be enhanced to Rs.200/- per day for each day of default subject to a maximum of 5 percent of the estimated cost of the work put to tender. The decision of the Engineer-in-Charge shall be final and binding on the parties.

Should it appear to the Engineer-in-Charge that the contractor(s) is/are not properly observing and complying with the provisions of the Contractor's Labour Regulations and Model Rules and the provisions of the Contract Labour (Regulation and Abolition) Act 1970, and the Contract Labour (R&A) Central Rules 1971, for the protection of health and sanitary arrangements for work people employed by the contractor(s) (hereinafter referred as "the said Rules") the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and/observe the said Rules and to provide the amenities to the work people as aforesaid, the Engineer-in-Charge shall have the power to provide the amenities hereinbefore mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his/their own expense and to approved standards all necessary huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said huts and sanitary arrangements be remodeled and/or reconstructed according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such huts and sanitary

arrangements according to approved standards within the period specified in the notice, the Engineer-in-Charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the contractor(s).

**11.41 Clause 19H – Specifications for labour camp**

The contractor(s) shall at his/their own cost provide his/their labour with a sufficient number of huts (hereinafter referred to as the camp) of the following specifications on a suitable plot of land to be approved by the Engineer-in-Charge.

i)     **a)** The minimum height of each hut at the eaves level shall be 2.10m (7 ft) and the floor area to be provided with be at the rate of 2.7 sq.m (30 sq.ft.) for each member of the worker's family staying with the labourer.

**b)** The contractor(s) shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.50m (6'x5') adjacent to the hut for each family.

**c)** The contractor(s) shall also construct temporary latrines and urinals for the use of the labourers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.

**d)** The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitably screened.

ii)    **a)** All the huts shall have walls of sun-dried or burnt-bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-Charge. In case of sun-dried bricks, the walls should be plastered with mud gobri on both sides. The floor may be kutcha but plastered with mud gobri and shall be at least 15 cm (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the contractor shall ensure that throughout the period of their occupation the roofs remain water-tight.

**b)** The contractor(s) shall provide each hut with proper ventilation.

**c)** All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.

**d)** There shall be kept an open space of at least 7.2m (8 yards) between the rows of huts which may be reduced to 6m (20 ft.) according to the availability of site with the approval of the Engineer-in-Charge. Back to back construction will be allowed.

iii) **Water supply** – the contractor(s) shall provide adequate supply of water for the use of labourers. The provisions shall not be less than two gallons

of pure and wholesome water per head per day for drinking purposes and three gallons of clean water per head per day for bathing and washing purposes. Where piped water supply is available, supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provided. The contractor(s) shall also at his/their own cost make arrangements for laying pipe lines for water supply to his/their labour camp from the existing mains wherever available, and shall pay all fees and charges therefore.

- iv) The site selected for the camp shall be high ground, removed from jungle.
- v) **Disposal of Excreta** – The contractor(s) shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of the excreta through the Municipal Committee/ authority and inform it about the number of labourers employed so that arrangements may be made by such Committee/authority for the removal of the excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality/ authority. The contractor shall provide one sweeper for every eight seats in case of dry system.
- vi) **Drainage** – The contractor(s) shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy.
- vii) The contractor(s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.
- viii) **Sanitation** – The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the Local Public Health and Medical Authorities.

#### 11.42. Clause 19I

The Engineer-in-Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors' employ the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirements.

#### 11.43 Clause 19J

It shall be the responsibility of the contractor to see that the building under construction is not occupied by and body un-authorizedly during construction, and is handed over to the Engineer-in-Charge with vacant possession of complete building. If such building though completed is occupied illegally, then the Engineer-in-Charge shall have the option to refuse to accept the said building/buildings in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay a levy upto 5% of tendered value of work may be imposed by the EIL whose decision shall be final both with regard to the justification and quantum and be binding on the contractor.

However, the Superintending Engineer, through a notice, may require the contractor to remove the illegal occupation any time on or before construction and delivery.

**11.44 Clause 20**

***Minimum Wages Act to be Complied with***

The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.

**11.45 Clause 21**

***Work not to be sublet. Action in case of insolvency***

The contractor shall not assign or sublet without the written approval of the Engineer-in-Charge. And if the contractor shall assign or sublet this contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-Charge on behalf of the DDA shall have power to adopt the course specified in Clause 3 hereof in the interest of DDA and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

**11.46 Clause 22**

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of DDA without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

**11.47 Clause 23**

***Changes in firm's Constitution to be intimated***

Where the contractor is a partnership firm, the previous approval in writing of the Engineer-in-Charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 21.

**11.48 Clause 24**

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in-Charge who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

#### 11.49 Clause 25

##### *Settlement of Disputes & Arbitration*

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instruction herein before mentioned as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or things whatsoever, in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the work or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:-

- i). If the contractor considers any work demanded of him to be outside the requirements of the contract or disputes any drawings, record or decision given in writing by the Engineer-in-charge on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, he shall promptly, within 15 days request the Superintending Engineer in writing for written instruction or decision. Thereupon the Superintending Engineer shall give his written instructions or decision within a period of one month from the receipt of the contractor's letter.

If the Superintending Engineer fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instruction or decision of the Superintending Engineer, the contractor may, within 15 days of the receipt of Superintending Engineer's decision, appeal to the Chief Engineer, who shall afford an opportunity to the contractor to be heard, if the latter so desires and to offer evidence in support of his appeal. The Chief Engineer shall give his decision within 30 days of receipt of Contractor's Appeal. If, the contractor is dissatisfied with this decision, the contractor shall within a period of 30 days from receipt of the decision, give notice to the Engineer Member for appointment of Arbitrator failing which, the said decision shall be final, binding and conclusive and not referable to adjudication by the arbitrator.

- ii). Except where the decision has become final binding and conclusive in terms of Sub-Para (i) above, disputes or difference shall be referred for adjudication through arbitration by a Sole Arbitrator, who shall be technical person having the knowledge and experience of the trade, appointed by the Engineer Member, DDA. It will be no objection to any such appointment that the arbitrator so appointed is a DDA employee that he had to deal with the matter to which the contract relates and that in the course of his duties as DDA employee, he has expressed his views in all or any of the matters in dispute or difference. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another sole-arbitrator shall be appointed in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

It is term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each such dispute alongwith the notice for appointment of the arbitrator and giving the reference to the rejection by the Chief Engineer of the appeal.

It is also a term of this contract that no person other than a person appointed by the Engineer Member, DDA, as aforesaid, should act as arbitrator and, if, for any reason that is not possible, the matter shall not be referred to the arbitration at all. It is also a term of this contract that if the contractor does not make any demand for appointment or arbitrator in respect of any claims in writing as aforesaid within 120 days of receiving the intimation from the Engineer-in-Charge that the bill is ready for the payment, the claim of the contractor shall be deemed to have been waived and absolutely barred and the Delhi Development Authority shall be discharged and released of all liabilities under the contract in respect of these claims.

The arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act 1996 (26 of 1996) or any statutory modifications or re-enactment thereof and the rules made there-under and for the time being in force shall apply to the arbitration proceedings under this clause.

It is also a term of this contract that the arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority and give separate award against each dispute and claim referred to him and , in all cases, where the total amount of the claims by any party exceeds Rs. 1,00,000/-, the arbitrator shall give reasons for the award.

It is also a term of the contract that if any fees are payable to the arbitrator, these shall be paid equally by both the parties.

It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he issues the notice to both the parties calling them to submit their statement-of-claims and counter-statement-of-claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any, of the arbitrator, shall, if required, to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof shall be paid and fix or settle the amount of costs to be so paid.

The decision of the Superintending Engineer regarding the quantum or reduction as well as justification thereof in respect of rates for sub-standard work which may be decided to be accepted will be final and would not be open to arbitration.

**11.50 Clause 26**

***Contractor to indemnify Govt. against Patent Rights***

The contractor shall fully indemnify and keep indemnified the DDA against and action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against DDA in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise therefrom, provided that the contractor shall not be liable to indemnify the DDA if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge in this behalf.

**11.51 Clause 27**

***Lump sum Provisions in Tender***

When the estimate on which a tender is made includes lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer-in-Charge payable of measurement, the Engineer-in-Charge may at his discretion pay the lump sum amount entered in the estimate, and the certificate in writing of the Engineer-in-Charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.

**11.52 Clause 28**

***Action where no Specifications are specified***

In the case of any class of work for which there is no such specifications as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturers specifications, if not available then as per District Specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-Charge.

**11.53 Clause 29**

***With-holding and lien in respect of sums due from contractor***

- i) Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, the Engineer-in-Charge or the DDA shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Engineer-in-Charge or the DDA shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from



the contractor, the Engineer-in-Charge or the DDA shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the DDA by any dept of Govt. of NCT Delhi or any contracting person through the DDA pending finalization of adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer-in-Charge or DDA will be kept withheld or retained as such by the Engineer-in-Charge or DDA till the claim arising out of or under the contract is determined by the arbitrator (if the contract is governed by the arbitration clause) by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership firm or a limited company, the Engineer-in-Charge or the DDA shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/ limited company as the case may be, whether in his individual capacity or otherwise.

ii) DDA shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over payment and it shall be lawful for DDA to recover the same from him in the manner prescribed in sub clause (i) of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by DDA to the contractor, with any interest thereon whatsoever.

Provided that the DDA shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment or any sum paid short where such payment has been agreed upon between the EIL or Executive Engineer on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the EIL or the Executive Engineer.

#### 11.54 Clause 29A

##### *Lien in respect of claims in other Contracts*

Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer-in-Charge or the DDA any other contracting person or persons through Engineer-in-Charge against any claim of the Engineer-in-Charge or DDA or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Engineer-in-Charge or the DDA or with such other person or persons.

It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Engineer-in-Charge or the DDA will be kept withheld or retained as such by the Engineer-in-Charge or the DDA or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

#### 11.55 Clause 30

##### *Employment of coal mining or controlled area labour not permissible*

The contractor shall not employ coal mining or controlled area labour falling under any category whatsoever on or in connection with the work or recruit labour from area within a radius of 32 km (20 miles) of the controlled area. Subject as above the contractor shall employ imported labour only i.e., deposit imported labour or labour imported by contractors from area, from which import is permitted.

Where ceiling price for imported labour has been fixed by State or Regional Labour Committees not more than that ceiling price shall be paid to the labour by the contractor.

The contractor shall immediately remove any labourer who may be pointed out by the Engineer-in-Charge as being a coal mining or controlled area labourer. Failure to do so shall render the contractor liable to pay to DDA a sum calculated at the rate of Rs.10/- per day per labourer. The certificate of the Engineer-in-Charge about the number of coal mining or controlled area labourer and the number of days for which they worked shall be final and binding upon all parties to this contract.

It is declared and agreed between the parties that the aforesaid stipulation in this clause is one in which the public are interested within the meaning of the exception in Section 74 of Indian Contract Act, 1872.

**Explanation :** - Controlled Area means the following areas :

Districts of Dhanbad, Hazaribagh, Jamtara – a Sub-Division under Santhal Pargana Commissionery, Districts of Bankura, Birbhum, Burdwan, District of Bilaspur.

Any other area which may be declared a Controlled Area by or with the approval of the Central Government.

#### **11.56 Clause 31**

##### ***Unfiltered water supply***

The contractor(s) shall make his/their own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions :

- i) That the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of the Engineer-in-Charge.
- ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are in the opinion of the Engineer-in-Charge, unsatisfactory.

#### **Clause 31A**

##### ***Departmental water supply, if available***

Water if available may be supplied to the contractor by the department subject to the following conditions :

- i) The water charges @ 1% shall be recovered on gross amount of the work done.
- ii) The contractor(s) shall make his/their own arrangement of water connection and laying of pipelines from existing main of source of supply.
- iii) incumbent on the contractor(s) to make alternative arrangements for water at his / their own cost in the event of any temporary break down in the DDA water main so that the progress of his/their work is not held up for want of water. No claim of damage or refund of water charges will be entertained on account of such break down.

#### **11.57 Clause 32**

##### ***Alternate water arrangements***

i) Where there is no piped water supply arrangement and the water is taken by the contractor from the wells or hand pump constructed by the Government, no charge shall be recovered from the contractor on that account. The contractor shall, however, draw water at such hours of the day that it does not interfere with the normal use for which the hand pumps and wells are intended. He will also be responsible for all damage and abnormal repairs arising out of his use, the cost of which shall be recoverable from him. The Engineer-in-Charge shall be the final authority to determine the cost recoverable from the contractor on this account and his decision shall be binding on the contractor.

ii) The contractor shall be allowed to construct temporary wells in DDA land for taking water for construction purposes only after he has got permission of the Engineer-in-Charge in writing. No charges shall be recovered from the contractor on this account, but the contractor shall be required to provide necessary safety arrangements to avoid any accidents or damage to adjacent buildings, roads and service lines. He shall be responsible for any accidents or damage caused due to construction and subsequent maintenance of the wells and shall restore the ground to its original condition after the wells are dismantled on completion of the work.

**11.58 Clause 33**

***Return of Surplus materials***

----- DELETED -----

**11.59 Clause 34**

***Hire of Plant & Machinery***

----- DELETED -----

**11.60 Clause 35**

***Condition relating to use of asphaltic materials***

----- DELETED -----

**11.61 Clause 36**

***Employment of Technical Staff and employees***

Contractors Superintendence, Supervision, Technical Staff & Employees

i) The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-in-Charge the name(s), qualifications, experience, age, address(s) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative(s) who will be supervising the work. Minimum requirement of such technical representative(s) and their qualifications and experience shall not be lower than specified in Schedule 'F'. The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative(s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative(s) according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative and other technical representative(s) shall be appointed by the contractor soon after receipt of the approval from Engineer-in-Charge and shall be available at site within 15 days of start of work

If the contractor (or any partner in case of firm/company) who himself has such qualification, it will not be necessary for the said contractor to appoint

such principal technical representative but the contractor shall designate and appoint a responsible agent to represent him and to be present at the work whenever the contractor is not in a position to be so present. All the provisions applicable to the principal technical representative under the Clause will also be applicable in such a case to contractor or his responsible agent. The principal technical representative and/or the contractor shall on receiving reasonable notice from the Engineer-in-Charge or his designated representative(s) in charge of the work in writing or in person or otherwise, present himself to the Engineer-in-Charge and/or at the site of work, as required, to take instructions. Instruction given to the principal technical representative or the responsible agent shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and/or the contractor or his responsible authorized agent shall be actually available at site at-least two working days every week, these days shall be determined in consultation with the Engineer-in-Charge as well as fully during important stages of execution of work, during recording of measurement of works and whenever so required by the Engineer-in-Charge by a notice as aforesaid and shall also note down instructions conveyed by the Engineer-in-Charge or his designated representative in the site order book and shall affix his signature in token of noting down the instructions and in token of acceptance of measurement. There shall be no objection if the representative / agent looks after more than one work and not more than three works in same station provided these details are disclosed to the Engineer-in-Charge and he shall be satisfied that the provisions and the purpose of this clause are fulfilled satisfactorily.

If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (non-refundable) shall be effected from the contractor as specified in Schedule 'F' and the decision of the Engineer-in-Charge as recorded in the site order book and measurement recorded checked/test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable technical Principal technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved substitute or do not discharge their responsibilities satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) along with every on account bill/final bill and shall produce evidence if at any time so required by the Engineer-in-Charge.

**ii)** The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work.

The contractor shall provide and employ skilled, semiskilled and unskilled labour as is necessary for proper and timely execution of the work.

The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

#### 11.62 Clause 36(i)

***Minimum Qualification & experience required for Principal Technical representative.***

- |           |   |   |
|-----------|---|---|
| <b>a</b>  | For works with estimated cost put to tender more than   |   |
| <b>i</b>  | Rs. 10 lakhs for Civil work   | Graduate or retired AE possessing                               |
| <b>ii</b> | Rs. 5 lakhs for Elect/Mech. works   | At least recognized diploma                                     |
| <b>b</b>  | For works with estimated cost put to tender   |   |
| <b>i</b>  | More than Rs. 5 lakhs but less than Rs. 10 lacs for civil works                                       | Recognized Diploma holder                                       |
| <b>ii</b> | More than Rs. 1 lac but less than Rs. 5 lacs for Elect/Mech. works                                    |   |
| <b>c</b>  | Discipline to which the Principal technical Representative should belong                              | Civil/Elect. Mech.  |
| <b>d</b>  | Minimum experience of work  | -----years  |
| <b>e</b>  | Recovery to be effected from the contractor in the event of not fulfilling provisions of clause 36(i) | Rs.25,000/- p.m. for Graduate<br>Rs.15,000/- for diploma holder |

#### 11.63 Clause 37

***Levy/Taxes payable by Contractor***

- i)** Sales Tax, Labour cess & VAT or any other tax on materials & labour in respect of this contract shall be payable by the contractor and DDA shall not entertain any claim whatsoever in this respect.
- ii)** The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.
- iii)** IF pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the Government of India and does not any time become payable by the contractor to the DDA. Local authorities in respect of any material used by the contractor in the works then in such a case, it shall be lawful to the Government of India and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

#### 11.64 Clause 38

***Conditions for reimbursement of levy/taxes if levied after receipt of tenders***

- i) All tendered rates shall be inclusive of all taxes and levies payable under respective statutes. However, pursuant to the Constitution (46<sup>th</sup> Amendment) Act, 1982, if any further tax or levy is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the contractor thereupon necessarily and properly pays such taxes/ levies, the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of the E.M DDA/Administrative Head DDA (whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.
- ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the DDA and/or the Engineer-in-Charge and further shall furnish such other information/ document as the Engineer-in-Charge may require from time to time.
- iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy, pursuant to the Constitution (Forty Sixty Amendment) Act 1982, give a written notice thereof to the Engineer-in-Charge that the same is given pursuant to this conditions, together with all necessary information relating thereto.

#### 11.65 Clause 39

***Termination of Contract on death of contractor***

Without prejudice to any of the rights or remedies under this contract if the contractor dies, the Divisional Officer on behalf of the DDA shall have the option of terminating the contract without compensation to the contractor.

#### 11.66 Clause 40

***If Near relative working in DDA then the contractor not allowed to tender***

The contractor shall not be permitted to tender for works in the DDA on circle (responsible for award and execution of contracts) in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the Executive Engineer and Assistant Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Gazetted Officer in the DDA or in the Directorate of Higher Education GNCTD of Delhi. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department. If however the contractor is registered in any other department, he shall be debarred from tendering in DDA for any breach of this condition.

**Note :** By the term “Near relatives” is meant wife, husband, parents and grand parents, children and grand children, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

**11.67 Clause 41**

***No Gazetted Engineer to work as Contractor within one years of retirement***

No engineer of gazetted rank or other gazetted officer employed in engineering or administrative duties in an engineering department of the Government of India shall work as a contractor or employee of a contractor for a period of two years after his retirement from Government service without the previous permission of Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of Government of India as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

**11.68 Clause 42**

***Return of material & recovery for excess material issued***

----- DELETED -----

**11.69 Clause 43**

***Compensation during warlike situations***

The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-Charge and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such payments being in addition to compensation upto the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be concerned for a higher amount. The contractor shall be paid for the damages/ destruction suffered and for the restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the A.R.P. Officers or the Engineer-in-Charge (b) for any material etc. not on the site of the work or for any tools, plant, machinery, scaffolding, temporary building and other things not intended for the work.



**11.70 Clause 44**

***Apprentices Act provisions to be complied with***

The contractor shall comply with the provisions of the Apprentices Act, 1961 and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the DDA may, in his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

**11.71 Clause 45**

***Release of Security deposit after labour clearance***

Security Deposit of the work shall not be refunded till the contractor produces a clearance certificate from the Labour Officer. As soon as the work is virtually complete the contractor shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer-in-Charge. The Engineer-in-Charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit will be released if otherwise due.

**11.72 Clause 46**

***Anti-Malaria Measures***

The contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Engineer-in-Charge including the filling up of any borrow pits which may have been dug by him.

## **12.0 SAFETY CODE**

- 12.1** Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than  $\frac{1}{2}$  to 1 (1.4 horizontal and 1 vertical).
- 12.2** Scaffolding of staging more than 3.6m (12ft.) above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm. (3ft.) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
- 12.3** Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6m (12ft.) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.
- 12.4** Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm (3ft.).
- 12.5** Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m. (30ft.) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. (11½") for ladder upto and including 3m. (10ft.) in length. For longer ladder, this width should be increased at least ¼" for each additional 30cm. (1 foot) of length. Uniform step spacing of not more than 30 cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit, action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.

**12.6** Excavation and Trenching – All trenches 1.2m. (4ft.) or more in depth, shall at all times be supplied with at least one ladder for each 30m. (100ft.) in length or fraction thereof Ladder shall extend from bottom of the trench to at least 90 cm. (3ft.) above the surface of the ground. The side of the trenches which are 1.5m. (5ft.) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5m. (5ft.) of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.

**12.7** Demolition – Before any demolition work is commenced and also during the progress of the work,

- i) All roads and open areas adjacent to the work site shall either be closed or suitably protected.
- ii) No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.
- iii) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

**12.8** All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned :- The following safety equipment shall invariably be provided.

- i) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
- ii) Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective goggles.
- iii) Those engaged in welding works shall be provided with welder's protective eye-shields.
- iv) Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- v) When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated at-least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measure are adhered to :

- a) Entry for workers into the line shall not be allowed except under supervision of the JE or any other higher office.
- b) At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.
- c) Before entry presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and given indication of their presence.
- d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.
- e) Safety belt with rope should be provided to the workers. While working inside the manholes such rope should be handled by two men standing outside to enable him to be pulled out during emergency.
- f) The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Power warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.
- g) No smoking or open flames shall be allowed near the blocked manhole being cleaned.
- h) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.
- i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in-Charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.
- j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.
- k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 metres away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.

- l)** The workers engaged for cleaning the manholes/sewers should be properly trained before allowing to work in the manhole.
  - m)** The workers shall be provided with Gumboots or non sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.
  - n)** Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.
  - o)** If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.
  - p)** The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard is an individual case will be final.
- vi)** The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precaution should be taken :
  - a)** No paint containing lead or lead products shall be used except in the form of paste or ready made paint.
  - b)** Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scraped.
  - c)** Overalls shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.

**12.9** An additional clause (viii) (i) of Safety Code (iv) the Contractor shall not employ women and men below the age of 18 on the work of painting with product contained lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following principles must be observed for such use :

- i)** While lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.

- ii) Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.
- iii) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
- iv) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
- v) Overall shall be worn by working painters during the whole of working period.
- vi) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.
- vii) Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical man appointed by competent authority of DDA
- viii) DDA may require, when necessary medical examination of workers.
- ix) Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.

**12.10** When the work is done near nay place where there is risk of drowning, all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.

**12.11** Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions :

i) a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.

b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.

ii) Every crane driver or hoisting appliance operator, shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding which or give signals to operator.

iii) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be

plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

iv) In case of departmental machines, the safe working load shall be notified by the Electrical Engineer-in-Charge. As regards contractor's machines the contractors shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings any machinery to site of work and get it verified by the Electrical Engineer concerned.

- 12.12** Motors, gearing transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.
- 12.13** All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.
- 12.14** These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.
- 12.15** To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer or Engineer-in-Charge of the department or their representatives.
- 12.16** Notwithstanding the above clauses from (1) to (15) there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

### **13.0 Model Rules for the Protection of Health and Sanitary Arrangements for Workers Employed by D.D.A or its Contractors**

#### **13.1 Application**

These rules shall apply to all buildings and construction works in charge of DDA in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the contract work is in progress.

#### **13.2 Definition**

Work place means a place where twenty or more workers are ordinarily employed in connection with construction work on any day during the period during which the contract work is in progress.

#### **13.3 First-Aid Facilities**

- i) At every work place there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.
- ii) The first-aid box shall be distinctly marked with a red cross on white back ground and shall contain the following equipment:
  - a) For work places in which the number of contract labour employed does not exceed 50

Each first-aid box shall contain the following equipments:

- 1. 6 small sterilized dressings.
- 2. 3 medium size sterilized dressings.
- 3. 3 large size sterilized dressings.
- 4. 3 large sterilized burn dressings.
- 5. 1 (30 ml.) bottle containing a two percent alcoholic solution of iodine.
- 6. 1 (30ml.) bottle containing salvolatile having the does and mode of administration indicated on the label.
- 7. 1 snakebite lancet.
- 8. 1 (30 gms.) bottle of potassium permanganate crystals.
- 9. 1 pair scissors.
- 10. 1 copy of the first-aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
- 11. 1 bottle containing 100 tablets (each of 5 gms.) of aspirin.
- 12. Ointment for burns.
- 13. A bottle of suitable surgical antiseptic solution.



- b) For work places in which the number of contract labour exceed 50

Each first-aid box shall contain the following equipments:

1. 12 small sterilized dressings.
2. 6 small size sterilized dressings.
3. 6 large size sterilized dressings.
4. 6 large size sterilized burn dressings.
5. 6 (15 gms.) packets sterilized cotton wool.
6. 1 (60 ml.) bottle containing a two percent alcoholic solution iodine.
7. 1 (60 ml.) bottle containing salvolatile having the does and mode of administration indicated on the label.
8. 1 roll of adhesive plaster.
9. 1 snake bite lancet.
10. 1 (30 gms.) bottle of potassium permanganate crystals.
11. 1 pair scissors.
12. 1 copy of the first-aid leaflet issued by the Director General Factory Advice Service and Labour Institutes/ Government of India.
13. A bottle containing 100 tablets (each of 5 gms.) of aspirin.
14. Ointment for burns.
15. A bottle of suitable surgical antiseptic solution.

- iii) Adequate arrangements shall be made for immediate recoupment of the equipment when necessary.
- iv) Nothing except the prescribed contents shall be kept in the First-aid box.
- v) The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.
- vi) A person in charge of the First-aid box shall be a person trained in First-aid treatment, in the work places where the number of contract labour employed is 150 or more.
- vii) In work places where the number of contract labour employed is 500 or more and hospital facilities are not available within easy distance from the works. First-aid posts shall be established and run by a trained compounder. The compounder shall be on duty and shall be available at all hours when the workers are at work.
- viii) Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or person suddenly taken ill to the nearest hospital.

### **13.4 Drinking Water**

- i) In every work place, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.
- ii) Where drinking water is obtained from an Intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.
- iii) Every water supply or storage shall be at a distance of not less than 50 feet from any latrine drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and waterproof.
- iv) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

### **13.5 Washing Facilities**

- i) In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of contract labour employed therein.
- ii) Separate and adequate cleaning facilities shall be provided for the use of male and female workers.
- iii) Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition.

### **13.6 Latrines & Urinals**

- i) Latrines shall be provided in every work place on the following scale namely :
  - a) Where female are employed there shall be at least one latrine for every 25 females.
  - b) Where males are employed, there shall be at least one latrine for every 25 males.

Provided that where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females as the case may be upto the first 100, and one for every 50 thereafter.

- ii) Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
- iii) Construction of latrines : The inside walls shall be constructed of masonry or some suitable heat-resisting nonabsorbent materials and

shall be cement washed inside and outside at least once a year, Latrines shall not be of a standard lower than borehole system.

- iv) a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers “For Men only” or “For Women Only” as the case may be.
- b) The notice shall also bear the figure of a man or of a woman, as the case may be.
- v) There shall be at least one urinal for male workers upto 50 and one for female workers upto fifty employed at a time, provided that where the number of male or female workmen, as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females upto the first 500 and one for every 100 or part thereafter.
- vi) a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.
- b) Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.
- vii) Water shall be provided by means of tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.
- viii) Disposal of excreta: Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternately excreta may be disposed of by putting a layer of night soil at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm. Layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn to manure).
- ix) The contractor shall at his own expense, carry out all instructions issued to him by the Engineer-in-Charge to effect proper disposal of night soil and other conservancy work in respect of the contractor’s workmen or employees on the site. The contractor shall be responsible for payment of any charges which may be levied by Municipal or Cantonment Authority for execution of such on his behalf.

### **13.7 Provision of Shelter During Rest**

At every place there shall be provided, free of cost, four suitable sheds, two for meals and the other two for rest separately for the use of men and women labour. The height of each shelter shall not be less than 3 metres (10 ft.) from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 sqm (6 sqft.) per head.

Provided that the Engineer-in-Charge may permit subject to his satisfaction, a portion of the building under construction or other alternative accommodation to be used for the purpose.

### **13.8 Creches**

- i) At every work place, at which 20 or more women worker are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom. The rooms shall be constructed with specifications as per clause 19H (ii) a, b & c.
- ii) The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.
- iii) The contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the bed room.
- iv) The contractor shall provide one ayaa to look after the children in the crèche when the number of women workers does not exceed 50 and two when the number of women workers exceed 50.
- v) The use of the rooms earmarked as crèches shall be restricted to children, their attendants and mothers of the children.

### **13.9 Canteens**

- i) In every work place where the work regarding the employment of contract labour is likely to continue for six months and where in contract labour numbering one hundred or more are ordinarily employed, an adequate canteen shall be provided by the contractor for the use of such contract labour.
- ii) The canteen shall be maintained by the contractor in an efficient manner.
- iii) The canteen shall consist of at least a dining hall, kitchen, storeroom, pantry and washing places separately for workers and utensils.
- iv) The canteen shall be sufficiently lighted at all times when any person has access to it.
- v) The floor shall be made of smooth and impervious materials and inside walls shall be lime-washed or colour washed at least once in each year.

Provided that the inside walls of the kitchen shall be line-washed every four months.

- vi) The premises of the canteen shall be maintained in a clean and sanitary condition.
- vii) Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.
- viii) Suitable arrangements shall be made for the collection and disposal of garbage.
- ix) The dining hall shall accommodate at a time 30 percent of the contract labour working at a time.
- x) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs shall not be less than one square meter (10 sq.ft.) per diner to be accommodated as prescribed in sub-Rule 9.
- xi)
  - a) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number.
  - b) Washing places for women shall be separate and screened to secure privacy.
- xii) Sufficient tables stools, chair or benches shall be available for the number of diners to be accommodated as prescribed in sub-Rule 9.
- xiii)
  - a)
    - 1. There shall be provided and maintained sufficient utensils crockery, furniture and any other equipments necessary for the efficient running of the canteen.
    - 2. The furniture utensils and other equipment shall be maintained in a clean and hygienic condition.
  - b)
    - 1. Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.
    - 2. A service counter, if provided, shall have top of smooth and impervious material.

**13.10** Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipments.

- xiv) The food stuffs and other items to be served in the canteen shall be in conformity with the normal habits of the contract labour.
- xv) The charges for food stuffs, beverages and any other items served in the canteen shall be based on 'No profit, No loss' and shall be conspicuously displayed in the canteen.

- xvi)** In arriving at the price of foodstuffs, and other article served in the canteen, the following items shall not be taken into consideration as expenditure namely :
- a)** The rent of land and building
  - b)** The depreciation and maintenance charges for the building and equipments provided for the canteen.
  - c)** The cost of purchase, repairs and replacement of equipments including furniture, crockery, cutlery and utensils.
  - d)** The water charges and other charges incurred for lighting and ventilation.
  - e)** The interest and amounts spent on the provision and maintenance of equipments provided for the canteen.
- xvii)** The accounts pertaining to the canteen shall be audited once every 12 months by registered accountants and auditors.

**13.11 Anti-Malarial Precautions**

The contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Engineer-in-Charge including the filling up of any borrow pits which may have been dug by him.

**13.12** The above rules shall be incorporated in the contracts and in notices inviting tenders and shall form an integral part of the contracts.

**13.13 Amendments**

Government may, from time to time, add to or amend these rules and issue directions – it may consider necessary for the purpose of removing any difficulty which may arise in the administration thereof.

## **14.0 CONTRACTOR'S LABOUR REGULATIONS**

### **14.1 Short Title**

These regulations may be called the Contractors Labour Regulations.

### **14.2 Definitions**

i) **Workman** means any person employed by DDA or its contractor directly or indirectly through a sub-contractor with or without the knowledge of the DDA to do any skilled, semiskilled or unskilled manual, supervisory, technical or clerical work for hire or reward, whether the terms of employment are expressed or implied but does not include any person :

- a) Who is employed mainly in a managerial or administrative capacity: or
- b) Who, being employed in a supervisory capacity drawn wages exceeding five hundred rupees per month or exercises either by the nature of the duties attached to the office or by reason of powers vested in him, functions mainly of managerial nature : or.
- c) Who is an out worker, that is to say, person to whom any article or materials are given out by or on behalf of the principal employers to be made up cleaned, washed, altered, ornamental finished, repaired adopted or otherwise processed for sale for the purpose of the trade or business of the principal employers and the process is to be carried out either in the home of the out worker or in some other premises, not being premises under the control and management of the principal employer.

No person below the age of 14 years shall be employed to act as a workman.

- ii) **Fair Wages** means wages whether for time or piecework fixed and notified under the provisions of the Minimum Wages Act from time to time.
- iii) **Contractors** shall include every person who undertakes to produce a given result other than a mere supply of goods or articles of manufacture through contract labour or who supplies contract labour for any work and includes a sub-contractor.
- iv) **Wages** shall have the same meaning as defined in the Payment of Wages Act.

**14.3** i) Normally working hours of an adult employee should not exceed 9 hours a day. The working day shall be so arranged that inclusive of interval for rest, if any, it shall not spread over more than 12 hours on any day.

ii) When an adult worker is made to work for more than 9 hours on any day or for more than 48 hours in any week, he shall be paid over time for the extra hours put in by him at double the ordinary rate of wages.

iii) a) Every worker shall be given a weekly holiday normally on a Sunday, in accordance with the provisions of the Minimum Wages (Central) Rules 1960 as amended from time to time irrespective of whether such worker is governed by the Minimum Wages Act or not.

b) Where the minimum wages prescribed by the Government under the Minimum Wages Act are not inclusive of the Wages for the weekly day of rest, the worker shall be entitled to rest day wages at the rate applicable to the next preceding day, provided he has worked under the same contractor for a continuous period of not less than 6 days.

c) Where a contractor is permitted by the Engineer-in-Charge to allow a worker to work on a normal weekly holiday, he shall grant a substituted holiday to him for the whole day on one of the five days immediately before or after the normal weekly holiday and pay wages to such worker for the work performed on the normal weekly holiday at overtime rate.

#### **14.4 Display of notice regarding wages etc.**

The contractor shall before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clear and legible condition in conspicuous places on the work, notices in English and in the local Indian languages spoken by the majority of the workers giving the minimum rates of wages fixed under Minimum Wages Act, the actual wages being paid, the hours of work for which such wages are earned, wages periods, dates of payments of wages and other relevant information as per Appendix 'III'.

#### **14.5 Payment Of Wages**

i) The contractor shall fix wage periods in respect of which wages shall be payable.

ii) No wage period shall exceed one month.

iii) The wages of every person employed as contract labour in an establishment or by a contractor where less than one thousand such persons are employed shall be paid before the expiry of seventh day and in other cases before the expiry of tenth day after the last day of the wage period in respect of which the wages are payable.

iv) Where the employment of any worker is terminated by or on behalf of the contractor the wages earned by him shall be paid before the expiry of the second working day from the date on which his employment is terminated.



- v) All payment of wages shall be made on a working day at the work premises and during the working time and on a date notified in advance and in case the work is completed before the expiry of the wage period, final payment shall be made within 48 hours of the last working day.
- vi) Wages due to every worker shall be paid to him direct or to other person authorized by him in this behalf.
- vii) All wages shall be paid in current coin or currency or in both.
- viii) Wages shall be paid without any deductions of any kind except those specified by the Central Government by general or special order in this behalf or permissible under the Payment of Wages Act 1956.
- ix) A notice showing the wages period and the place and time of disbursement of wages shall be displayed at the place of work and a copy sent by the contractor to the Engineer-in-Charge under acknowledgement.
- x) It shall be the duty of the contractor to ensure the disbursement of wages in the presence of the Junior Engineer or any other authorized representative of the Engineer-in-Charge who will be required to be present at the place and time of disbursement of wages by the contractor to workmen.
- xi) The contractor shall obtain from the Junior Engineer or any other authorized representative of the Engineer-in-Charge as the case may be a certificate under his signature at the end of the entries in the “Register of Wages” or the “wage-cum-Muster Roll” as the case may be in the following form :

“Certified that the amount shown in column No.----- has been paid to the workman concerned in my presence on ----- at -----.

#### **14.6 Fines And Deductions Which May Be Made From Wages**

- i) The wages of a worker shall be paid to him without any deduction of any kind except the following :
  - a) Fines
  - b) Deductions for absence from duty i.e. from the place or the places where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.
  - c) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money or any

other deduction which he is required to account, where such damage or loss is directly attributable to his neglect or default.

- d) Deduction for recovery of advances or for adjustment of overpayment of wages, advances granted shall be entered in a register.
  - e) Any other deduction which the Central Government may from time to time allow.
- ii) No fines should be imposed on any worker save in respect of such acts and omissions on his part as have been approved of by the Chief Labour Commissioner.

**Note :** An approved list of Acts and Omissions for which fines can be imposed is enclosed at Appendix-I.

- iii) No fine shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.
- iv) The total amount of fine which may be imposed in any one wage period on a worker shall not exceed an amount equal to three paise in a rupee of the total wages, payable to him in respect of that wage period.
- v) No fine imposed on any worker shall be recovered from him by installment, or after the expiry of sixty days from the date on which it was imposed.
- vi) Every fine shall be deemed to have been imposed on the day of the act or omission in respect of which it was imposed.

#### 14.7 Labour Records

- i) The contractor shall maintain a **Register of persons employed** on work on contract in Form XIII of the CL (R&A) Central Rules 1971 (Appendix IV).
- ii) The contractor shall maintain a **Muster Roll** register in respect of all workmen employed by him on the work under Contract in Form XVI of the CL (R&A) Rules 1971 (Appendix V).
- iii) The contractor shall maintain a **Wage Register** in respect of all workmen employed by him on the work under contract in Form XVII of the CL (R&A) Rules 1971 (Appendix VI).
- iv) **Register of accident** – The contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars :

- a) Full particulars of the labourers who met with accident

- b) Rate of Wages
  - c) Sex
  - d) Age
  - e) Nature of accident and cause of accident
  - f) Time and date of accident
  - g) Date and time when admitted in Hospital
  - h) Date of discharge from the Hospital
  - i) Period of treatment and result of treatment
  - j) Percentage of loss of earning capacity and disability as assessed by Medical Officer
  - k) Claim required to be paid under Workmen's Compensation Act
  - l) Date of payment of compensation
  - m) Amount paid with details of the person to whom the same was paid
  - n) Authority by whom the compensation was assessed
  - o) Remarks.
- v) The contractor shall maintain a **Register of Fines** in the Form XII of the CL (R&A) rules 1971 (Appendix-XI).
- The contractor shall display in a good condition and in a conspicuous place of work the approved list of acts and omissions for which fines can be imposed (Appendix-X).
- vi) The contractor shall maintain a **Register of deductions for damage or loss** in Form XX of the CL (F&A) rules 1971 (Appendix-XII).
- vii) The contractor shall maintain a **Register of Advances** in Form XXIII of the CL (R&A) Rules 1971 (Appendix-XIII).
- viii) The contractor shall maintain a **Register of Overtime** in Form XXIII of the CL (R&A) rules 1971 (Appendix-XIV).

#### 14.8 Attendance Card-Cum-Wage Slip

- i) The contractor shall issue an **Attendance card-cum-wage slip** to each workman employed by him in the specimen form at (Appendix-VII).
- ii) The card shall be valid for each wage period.
- iii) The contractor shall mark the attendance of each workman on the card twice each day, once at the commencement of the day and again after the rest interval, before he actually starts work.
- iv) The card shall remain in possession of the worker during the wage period under reference.
- v) The contractor shall complete the wage slip portion on the reverse of the card at least a day prior to the disbursement of wages in respect of the wage period under reference..

- vi) The contractor shall obtain the signature or thumb impression of the worker on the wage slip at the time of disbursement of wages and retain the card with himself.

#### **14.9 Employment Card**

The contractor shall issue an **Employment Card** in Form XIV of the CL (R&A) Central Rules 1971 to each worker within three days of the employment of the worker (Appendix-VIII).

#### **14.10 Service Certificate**

On termination of employment for any reason whatsoever the contractor shall issue to the workman whose services have been terminated, a **Service certificate** in Form XV of the CL (R&A) Central Rules 1971 (Appendix-IX).

#### **14.11 Preservation Of Labour Records Employment Card**

All records required to be maintained under Regulations Nos. 6&7 shall be preserved in original for a period of three years from the date of last entries made in them and shall be made available for inspection by the Engineer-in-Charge or Labour Officer or any other officers authorized by the Ministry of Urban Development in this behalf.

#### **14.12 Power Of Labour Officer To Make Investigations Or Enquiry**

The labour Officer or any person authorized by Central Government on their behalf shall have power to make enquires with a view to ascertaining and enforcing due and proper observance of Fair Wage Clauses and the Provisions of these Regulations. He shall investigate into any complaint regarding the default made by the contractor or sub-contractor in regard to such provision.

#### **14.13 Report Of Labour Officer**

The Labour Officer or other persons authorized as aforesaid shall submit a report of result of his investigation or enquiry to the Executive Engineer concerned indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractor's bill be made and the wages and other dues be paid to the labourers concerned. In case an appeal is made by the contractor under Clause 13 of these regulations, actual payment to labourers will be made by the Executive Engineer after the Superintending Engineer has given his decision on such appeal.

- i) The Executive Engineer shall arrange payments to the labour concerned within 45 days from the receipt of the report from the Labour Officer or the Superintending Engineer as the case may be.

#### **14.14 Appeal Against The Decision Of Labour Officer**

Any person aggrieved by the decision and recommendations of the Labour Officer or other person so authorized may appeal against such decision to the Superintending Engineer concerned within 30 days from the date of decision, forwarding simultaneously a copy of this appeal to the Executive Engineer concerned but subject to such appeal, the decision of the officer shall be final and binding upon the contractor.

#### **14.15 Prohibition Regarding Representation Through Lawyer**

- i) A workman shall be entitled to be represented in any investigation or enquiry under these regulations by :
  - a) An officer of a registered trade union of which he is a member.
  - b) An officer of a federation of trade unions to which the trade union referred to in clause (a) is affiliated.
  - c) Where the employer is not a member of any registered trade union, by an officer of a registered trade union, connected with the industry in which the worker is employed or by any other workman employed in the industry in which the worker is employed.
- ii) An employer shall be entitled to be represented in any investigation or enquiry under these regulations by :
  - a) An officer of an association of employers of which he is a member.
  - b) An officer of a federation of associations of employers to which association referred to in clause (a) is affiliated.
  - c) Where the employers is not a member of any association of employers, by an officer of association of employer connected with the industry in which the employer is engaged or by any other employer, engaged in the industry in which the employer is engaged.
- iii) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these regulations.

#### **14.16 Inspection Of Books And Slips**

The contractor shall allow inspection of all the prescribed labour records to any of this workers or to his agent at a convenient time and place after due notice is received to the Labour Officer or any other person, authorized by the Central Government on his behalf.

#### **14.17 Submission Of Returns**

The contractor shall submit periodical returns as may be specified from time to time.

#### **14.18 Amendments**

The Central Government may from time to time add to or amend the regulations and on any question as to the application/ Interpretation or effect of those regulations the decision of the Superintending Engineer concerned shall be final.

**Appendix 'I'**

**REGISTER OF MATERNITY BENEFITS**

Name and address of the contractor -----

Name and location of the work -----

<b>Name of the employee</b>	<b>Father's/ husband's name</b>	<b>Nature of employment</b>	<b>Period of actual employment</b>	<b>Date on which notice of confinement given</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**Date on which maternity leave commenced and ended**

<b>Date of Delivery/ Miscarriage</b>	<b>In case of delivery</b>		<b>In case of miscarriage</b>	
	<b>Commenced</b>	<b>Ended</b>	<b>Commenced</b>	<b>Ended</b>
<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>

**Leave pay paid to the employee**

<b>In case of delivery</b>		<b>In case of miscarriage</b>		<b>Remarks</b>
<b>Rate of leave pay</b>	<b>Amount paid</b>	<b>Rate of leave pay</b>	<b>Amount paid</b>	
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>

**Appendix 'II'**

**Specimen Form Of The Register, Regarding Maternity Benefit Admissible To  
The Contractor's Labour In Central Public Works Department Works**

Name and address of the contractor -----

Name and location of the work -----

1. Name of the woman and her husband's name
2. Designation
3. Date of appointment
4. Date with months and years in which she is employed
5. Date of discharge/ dismissal, if any
6. Date of production of certificates in respect of pregnancy
7. Date on which the woman informs about the expected delivery
8. Date of delivery/ miscarriage/ death
9. Date of production of certificate in respect of delivery/ miscarriage
10. Date with the amount of maternity/ death benefit paid in advance of expected delivery
11. Date with amount of subsequent payment of maternity benefit
12. Name of the person nominated by the woman to receive the payment of the maternity benefit after her death
13. If the woman dies, the date of her death, the name of the person to whom maternity benefit amount was paid, the month thereof and the date of payment
14. Signature of the contractor authenticating entries in the register
15. Remarks column for the use of Inspecting Officer

**Appendix 'III'**

**Labour Board**

Name and work -----

Name of Contractor -----

Address of Contractor -----

Name and address of DDA Division -----

Name of DDA Labour Officer -----

Address of DDA Labour Officer -----

Name of Labour Enforcement Officer -----

Address of Labour Enforcement Officer -----

S.No	Category	Minimum wage fixed	Actual wage paid	Number present	Remarks

Weekly holiday -----

Wage period -----

Date of payment of wages -----

Working hours -----

Rest interval -----



**Appendix 'IV'**

**Register of workmen Employed by Contractor**

Name and address of contractor -----  
-----

Name and address of establishment under which contract is carried on -----  
-----

Nature and location of work -----  
-----

Name and address of Principal Employer -----  
-----

S.No.	Name and surname of workman	Age and Sex	Father's/ Husband's name	Nature of employment/ designation	Permanent home address of the workman (Village and Tehsil, Taluk and Districts)	Local address	Date of commencement of employment	Signature or thumb impression of the workman	Date of termination of employment	Reasons for terminations	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

## Muster Roll

Name and address of Principal Employer -----  
----- For the Month of fortnight -----

[illegible]

Appendix 'VI'

Register of Wages

Name and address of contractor -----

Name and address of establishment under which contract is carried on -----

Nature and location of work -----

Name and address of Principal Employer ----- Wages Period : Monthly/ Fortnightly

Sl.No.	Name of Workman	Serial No. in the register of workman	Designation nature of work done	No. of days worked	Units of work done	Daily rate of wages/ piece rate	Amount of wages earned					Deductions if any, (indicate nature)	Net amount paid	Signature or thumb impression of the workman	Initial of contractor or his representative
							Basic wages	Dearness allowances	Overtime	Other cash payments (Indicate nature)	Total				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Appendix 'VII'

Wage Card No. -----

Wage Card

Name and address of contractor -----

Date of Issue -----

Name and location of work -----

Designation -----

Name of workman -----

Month / Fortnight -----

Rate of Wages -----

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<b>Morning</b>																																<b>Rate</b>
<b>Evening</b>																																<b>Amount</b>
<b>Initial</b>																																

Received from -----  
my wages

the sum of Rs. ----- on account of

The Wage Card is valid for one month from the date of issue

Signature

**Appendix 'VII'**

**Wages Slip**

Name and address of contractor -----

Name and Father's/ Husband's name of workman -----

Nature and location of work -----

For the Week/ Fortnight/ Month ending -----

1. No. of days worked -----

2. No. of units worked in case of piece rate workers -----

3. Rate of daily wages/ piece rate -----

4. Amount of overtime wages -----

5. Gross wages payable -----

6. Deduction, if any -----

7. Net amount of wages paid -----

**Initials of the Contractor  
or his Representative**

**Appendix 'VIII'**

**Employment Card**

Name and address of contractor -----

Name and address of establishment in/under which contract is carried on -----

Name of work and location of work -----

Name and address of Principal Employer -----

1. Name of the workman -----

2. Sl.No. in the register of workman employed -----

3. Name of employment/ designation -----

4. Wage rate (with particulars of unit in case of piece work ) -----

5. Wage period -----

6. Tenure of employment -----

7. Remarks-----

**Signature of Contractor**

Service Certificate

Name and address of contractor -----

Name and location of work -----

Name and address of workman -----

Age or date of birth -----

Identification marks -----

Father's/Husband's name -----

Name and address of establishment in under which contract is carried on -----

Name and address of Principal Employer -----

S.No.	Total Period for which employed		Nature of Work Done	Rate of wages (with particulars of unit in case of piece work)	Remarks
	From	To			
1		2	3	4	5

Signature

## Appendix 'X'

### List Of Acts & Omissions For Which Fines Can Be Imposed

In accordance with rule 7 (v) of the CPWD Contractor's Labour Regulations to be displayed prominently at the site of work both in English and local Language.

1. Willful insubordination or disobediences, whether along or in combination with other.
2. Theft fraud or dishonesty in connection with the contractors beside a business or property of DDA.
3. Taking or giving bribes or any illegal gratifications.
4. Habitual late attendance.
5. Drunkenness lighting, riotous or disorderly or indifferent behavior.
6. Habitual negligence.
7. Smoking near or around the area where combustible or other materials are locked.
8. Habitual indiscipline.
9. Causing damage to work in the progress or to property of the DDA or of the contractor.
10. Sleeping on duty.
11. Malingering or slowing down work.
12. Giving of false information regarding name, age father's name, etc.
13. Habitual loss of wage cards supplied by the employers.
14. Unauthorized use of employer's property of manufacturing or making of unauthorized particles at the work place.
15. Bad workmanship in construction and maintenance by skilled workers which is not approved by the Department and for which the contractors are compelled to undertake rectifications.
16. Making false complaints and/or misleading statements.
17. Engaging on trade within the premises of the establishments.
18. Any unauthorized divulgence of business affairs of the employees.



19. Collection or canvassing for the collection of any money within the premises of an establishment unless authorized by the employer.
20. Holding meeting inside the premises without previous section of the employers.
21. Threatening or intimidating any workman or employer during the working hours within the premises.

Appendix 'XI'

Register of Fines

Name and address of contractor -----

Name and address of establishment in under which contract is carried on -----

Nature and location of work -----

Name and address of Principal Employer-----

S.No.	Name of Workman	Father's/ Husband's name	Designation/ nature of employment	Act/ Omission for which fine imposed	Date of Offence	Whether workman showed cause against fine	Name of person in whose presence employee's explanation was heard	Wage period and wages payable	Amount of fine imposed	Date of which fine realized	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

Appendix 'XII'

Register of Deduction for Damage or Loss

Name and address of contractor -----

Name and address of establishment in under which contract is carried on -----

Nature and location of work -----

Name and address of Principal Employer-----

S.No.	Name of Workman	Father's/ Husband's name	Designation/ nature of employment	Particulars of damage or loss	Date of damage or loss	Whether workman showed cause against deduction	Name of person in whose presence employee's explanation was heard	Amount of deduction imposed	No. of installments	Date of recovery		Remarks
										First installment	Last installment	
1	2	3	4	5	6	7	8	9	10	11	12	13

Register of Advances

Name and address of contractor -----

Name and address of establishment in under which contract is carried on -----

Nature and location of work -----

Name and address of Principal Employer-----

S.No.	Name of Workman	Father's/ Husband's name	Designation/ nature of employment	Wage period and wages payable	Date and amount of advance given	Purpose(s) for which advance made	Number of installments by which advance to be repaid	Date of amount of each installment repaid	Date on which last installment was repaid	Remarks
1	2	3	4	5	6	7	8	9	10	11

Appendix 'XIV'

Register of Overtime

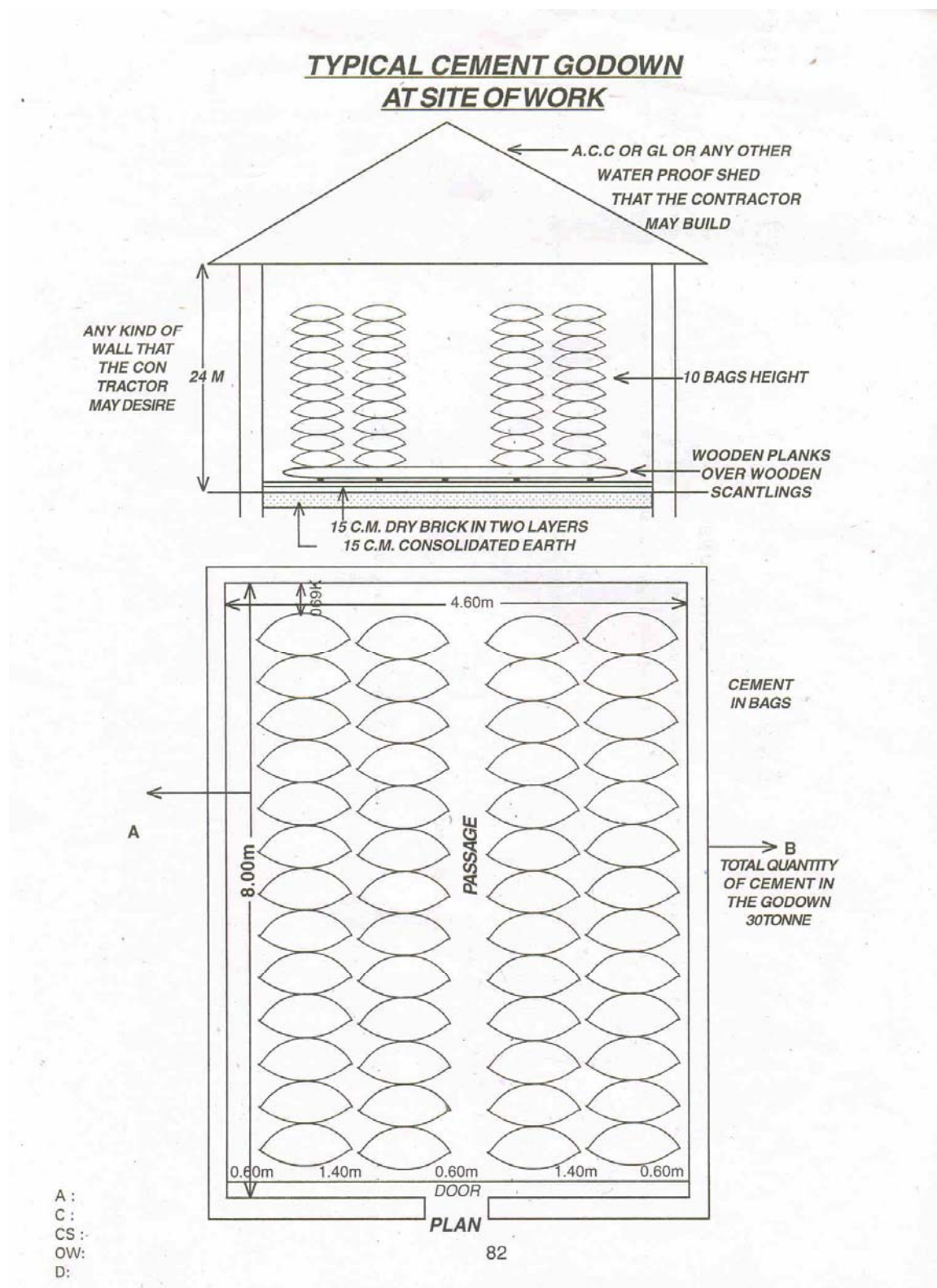
Name and address of contractor -----

Name and address of establishment in under which contract is carried on -----

Nature and location of work -----

Name and address of Principal Employer-----

S.No.	Name of Workman	Father's/ Husband's name	Sex	Designation/ nature of employment	Date on which Overtime worked	Total overtime worked or production in case of piece rated	Normal rate of wages	Overtime rate of wages	Overtime earnings	Rate on which overtime wages paid	Remarks
1	2	3	4	5	6	7	8	9	10	11	12



## 15.0 PROFORMA OF SCHEDULES

### Schedule 'A'

Bill of quantities - As per Financial Bid – Envelope II

### Schedule 'B'

Schedule of materials to be issued to the contractor. NIL

### Schedule 'C'

Tools and plants to be hired to the contractor : NIL

### Schedule 'D'

Extra schedule for specific requirements/ document for the work, if any. -  
NIL

### Schedule 'E'

Schedule of component of Cement, Steel, reinforcement bars for price escalation.

- Deleted -

**Schedule 'F'** Refer to general condition of contract.

**Name Of Work:** Commonwealth Games Projects Assigned to Delhi Development Authority (DDA)

**Sub Head:** Design Built Maintenance and Rental Contract for Temporary accommodation using Tensile Fabric at Commonwealth Games Village

Estimated Cost of Work	:	Rs. 42,17,40,320/-/-
i) Earnest money	:	Rs. 52,17,403/-
ii) Performance Guarantee	:	5% of tendered value
iii) Security Deposit	:	5% of tendered value

### General Rules & Directions:

Officer inviting tender: Executive Engineer, Commonwealth Games Division-2, DDA, New Delhi, INDIA.

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3.

i) Temporary Structure complete including foundation and all services 20%

### Definitions:

Percentage on cost of materials and labour to cover all overheads and profits

15%

Standard Schedule of Rates

DSR 2007 with upto date correction slips issued upto last date of receipt of

tender & market rate for  
non schedule Items

**Clause 1**

- i) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance 8 days
- ii) Maximum allowable extension beyond the period provided in (i) above by the Engineer-in-charge 4 days

**Clause 2**

Authority for levy compensation Under clause 2. Superintending Engineer, DDA

**Clause 2A**

Whether Clause 2A shall be applicable YES for Phase-I

**Clause 5**

Number of days after the date of issue of letter of award for reckoning date of start 12 days

**Key Mile Stone(s) as per Table Given Below : for Phase - I**

S.No.	Physical progress	Time Allowed	Amount to be with held in case of non-achievement of milestones
1.	Submission of drawing, design duly proof checked from IIT	20 days	In the event of not achieving the necessary progress for payment stages as assessed from the running payment due, appropriate amount will be withheld computed @ 1% of the tendered value of work for each day of delay for each milestone.
2.	Mobilization atleast 50% material for civil works.	50 days	
3.	Civil work of temporary structure for International Zone and Dining Hall	75 days	
4.	Mobilization of 100% material	90 days	
5.	Completion of remaining structure	120 days	

**Note: Payment schedule is given in Annexure – II**

**Phase – I** Period of Execution of Work: 120 days or **20<sup>th</sup> May 2010**  
(which ever is earlier)

**Phase – II** Period of Maintenance of Work 20<sup>th</sup> May 2010 / day of completion of Phase-I to **20.10.2010**

**Phase – III** Period of Removal 20.10.2010 to 24.12.2010



**Time schedule is given in Annexure - I**

Authority to give fair and reasonable extension  
of time for completion of work

-Superintending Engineer, DDA

**Clause 7**

Gross work to be done together with net payment/  
adjustment of advances for material collected, if  
any, since the last such payment for being eligible  
to interim payment

500 lacs (can be relaxed to  
200 lacs by Suptdg. Engineer)

**Clause 10 CA** – Deleted

**Clause 10 CC** – Deleted

**Clause 11** Specifications to be followed for execution of work

**For Civil work**

C.P.W.D. Specifications 2009 in general along with up to date correction slips  
& specification as attached for fabric work & demountable aluminum frame  
structure as attached.

**For Electrical work**

C.P.W.D. Specifications for electrical works Part - I (Internal) 2006, part – II  
(External) 1994 and BIS.

**Clause 12**

**12.1 & 12.2**

Deviation limit beyond which Clauses 12.2 &  
12.3 shall apply for building, electrical and  
Fire fighting work including Foundation work -30%

**12.3**

Deviation limit beyond which clauses 12.2  
& 12.3 shall apply for foundation work -Included in 12.1 & 12.2 above

**Clause 16**

Competent Authority for deciding reduced rates. -Superintending Engineer, DDA

**Clause 42**

- i) a) Schedule/statement for determining theoretical & steel  
on the basis of Delhi Schedule of Rates 2007 printed by C.P.W.D.
- ii) Variations permissible on theoretical quantities.
  - a) All other materials such as tensile fabric,  
Structural cable and fitting 1%  
plus/minus

### Recovery Rates For Quantities Beyond Permissible Variation

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

“Annexure - I “

### TIME SCHEDULE OF WORKS

Duration of work completion shall be as follow: (computed from date of commencement)

**Day 1 to Day 20 Off-site Work:** 20 days (for drawing approval)

**Day 1 to Day 40:** 40 (procurement of all materials at bidder's workshop.

**Day 1 to Day 120:** 120 days on site work

Total Time 120 days

Contractor to provide the detailed BAR CHART for execution of the work within the above time schedule

“Annexure – II”

### PAYMENT SCHEDULE

#### For Phase – I

The payment shall be made to contractor as per following stages of 70% of accepted tender amount for the structure: -

S.No.	Stage	Percentage	Cumulative Percentage
i)	After shop drawings approval against bank guarantee as security.	5	5
ii)	Against procurement of material at bidder's workshop on bank guarantee as security & inspection by the competent authority for release of payment.	20	25
iii)	Delivery at site	25	50
iv)	Against finished goods installed at site after inspection by Engineer-in-charge.	40	90
v)	On completion of work including testing & certificate.	10	100

### For Phase-II

The payment shall be made to contractor as per following stages of 20% of accepted tender amount for the structure: -

S.No.	Stage	Percentage	Cumulative Percentage
i)	On 30 <sup>th</sup> August 2010	50	50
ii)	On 20 <sup>th</sup> October 2010	50	100

### For Phase-III

The payment shall be made to contractor as per following stages of 10% of accepted tender amount for the structure: -

S.No.	Stage	Percentage	Cumulative Percentage
i)	Against Removal of Structure	50	50
ii)	After Completion of Work	50	100

## **16.0 SPECIAL CONDITIONS**

**16.1** Unless otherwise provided in the schedule of quantities, the rates tendered by the contractor shall be all-inclusive and shall apply to all heights, levels, depths, leads, lifts etc. The rates for all items of work, unless clearly specified otherwise, shall include the cost of all labour, materials, and other inputs involved in the execution of the items. This rates shall include but not limited to, also inclusive of all taxes, duties, octrois, transportation etc.

**16.2** No foreign exchange shall be made available by the department for the purpose of procurement of equipment, plants, machinery, materials of any kind or any other items required to be carried out in execution of work.

**16.3** Royalty at the prevalent rates and all other incidental expenditure shall have to be paid by the contractor on all the materials like boulders, stone metals, earth sand bajri or any other materials etc. collected by him for the execution of the work directly to the concerned revenue Authority of the State or Central Government. His rates are deemed to include all such expenditure and nothing extra shall be paid.

**16.4** The Architectural, structural and other services drawings for the work shall at all time be properly correlated before executing any work and no claim whatsoever shall be entertained in this respect.

- i) The contractor shall submit shop drawings of staging and main structure arrangement works for Approval of Engineer-in-charge.
- ii) The contractor shall provide the installation manual of the temporary structure & accessories from the manufacturer to the engineer in charge before commencement of work. The contractor has to ensure that the work should be strictly carried out as per the manufacturer's instructions. Erection shall only be executed by the contractor's experienced installation supervisor. Such person shall have at least 10 years experience in demountable aluminum frame tensile membrane structures installation. They shall attend all membrane erection actions at the site. Provide guidance where necessary and appropriate. The erection procedure shall be examined with respect of practicality and compatibility with other work on the project. Where the contractor proposes to use a different basis for the erection procedure, full details shall be submitted for approval.

At the Technical Bid stage the contractor shall provide brief on above items and complete details along detailed designs within 20 days of date of Letter of Intent.

- iii) A clear and level site shall be provided for undertaking erection and assembly procedures of the fabric element. The Contractor shall arrange for activities on the site to co-operatively fit in with the erection procedure of the fabric membrane. Prior to commencement of erection, the contractor shall check all contact surfaces to be in contact

with the fabric for smoothness, and remove causes for rips and/or scratching during the installation of the fabric panels. The sub-contractor shall provide ground sheets where the membrane is to be dragged across a surface. Prevention of chaffing of the surface is required at all times. The Contractor shall limit access to the area where the fabric is to be installed to only the contractor's personnel during the preparation and installation of the fabric structure for proper protection. The fabric shall be protected from damages upon installation. No creasing or folding of the fabric around sharp corners will be permitted. The fabric shall not be abraded in any manner.

- iv) Damage occurring during the installation sequence may be temporarily repaired with field patches; however, permanent repairs shall be made with full panel replacement from seam to seam or seam to approved splice.
- v) Clean the fabric membrane after erection. Remove all signs of dirt and panel markings where visible by the naked eye from 3 meters from the fabric.
- vi) The contractor shall give one full working day's notice to the Engineer-in-charge on completion of installation of the structure and shall execute immediately any adjustments, making good damage or defects.
- vii) There shall be no wrinkles in the completed membrane that in the Engineer-in charge's opinion are visually objectionable whether viewed internally or externally. Some tolerance on uniformity of the tensioned fabric against wrinkling is accepted. As a guide isolated wrinkles up to 200 mm long should be limited to a maximum of one only per 200 sq. meter area of fabric. Minor wrinkles are accepted as being expected around convergence points. For the purpose of this clause, a wrinkle shall be a fold in the tensioned membrane in the prestressed condition in still air, and which is visible from the ground below the structure.
- viii) The contractor, through his engineers, shall ensure quality construction in a planned and time bound manner. Any sub-standard Material /work beyond set out tolerance limits shall be summarily rejected by the Engineer-in-Charge.

**16.5** The contractor shall have to make approaches, to the site, if so required and keep them in good condition for transportation of labour and materials as well as inspection of works by the Engineer-in-charge. Nothing extra shall be paid on this account.

**16.6** The work shall be carried out in such manner so as not to interfere or affect or disturb other works, being executed by other agencies, if any. He shall arrange his work with that of the other in an acceptable and coordinated manner and shall perform it, in proper sequence to the complete satisfaction of

the Engineer-in-Charge. Any damage done by the contractor to any existing work shall be made good by him at his own cost. Otherwise the same shall be got done at his risk and cost.

- 16.7** The contractor shall leave such recesses, holes, openings etc. as may be required for the electric, air-conditioning, fire-fighting and other related works for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be provided by the contractor without any extra cost to the department unless otherwise specifically mentioned and the contractor shall fix the same at the time of casting of concrete, stone work and brick works if required, and nothing extra shall be payable on this account unless otherwise mentioned in the item/contract.
- 16.8** The contractor shall make his own arrangements for obtaining electric connections and make necessary payments directly to the department concerned. The department will however make all reasonable recommendations to the authority concerned in this regard.
- 16.9** The contractor shall be responsible to arrange at his own cost all necessary tools and plants required for execution of this work. Tools, plant and machinery required shall be brought to the site to maintain the progress as per schedule of work and also as and when required by the Engineer-in-Charge and same shall not be removed without the consent of the Engineer-in-Charge.
- 16.10** The contractor or his authorized representative should always be available at the site of work to take instructions from Engineer in charge, and ensure proper execution of work.
- 16.11** No work shall commence in the absence of contractor's engineers and they shall certify in writing about the correctness of layout alignment of structure and shall ensure stability of all structural such as shuttering, scaffolding and other related items.
- 16.12** All work and materials brought and left upon the ground by the contractor or by his orders for the purpose of forming part of the works, are to be considered to be the property of the DDA and the same are not to be removed or taken away by the contractor or any other person without consent in writing of the Engineer-in-charge but the DDA is not to be in any way responsible for any loss or damage which may happen to or in respect of any such work or materials either by the same being lost or damaged by weather or otherwise.
- 16.13** The contractor shall execute the different items simultaneously, as far as possible, so that minimum breakage and repairs are involved.
- 16.14** Contractor may be required to execute the work under foul condition and nothing extra for executing the work in foul condition is payable
- 16.15** The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants of adjacent properties and to the public

in general and to prevent any damage to such properties and any pollution of environment and waterways. He shall make good at his own cost and to the satisfaction of the Engineer-in-Charge, any damage to roads, paths, cross-drainage works or public or private property whatsoever caused by the execution of the work or by traffic brought thereon by the contractor. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants/users of adjoining buildings.

- 16.16** No payment will be made to the contractor for damage caused by rains, or other natural calamity or other unforeseen reasons during the execution of the works and no such claim on this account will be entertained by DDA.
- 16.17** Existing drains, pipes, cables, overhead wires, sewer lines, water lines and similar services encountered in the course of the execution of the work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.
- 16.18** Contractor shall give the Engineer-in-charge weekly, a progress report of work done in previous week vis-a-vis target and programme for current week of the work. The progress of work shall be reviewed periodically by the Engineer-in charge with the contractor and shortfalls, if any, sorted out. The contractor shall thereupon take such action as may be necessary to bring back his work to schedule without additional cost to the department.
- 16.19** All materials which are specified to be tested at the manufacturer's works shall satisfactorily pass the tests in presence of the authorized representative of Engineer-in-charge before being used in the work. In case all requisite testing facilities are not available at the manufacturer's premises, such testing shall be conducted at laboratory approved by the Engineer-in-charge.
- 16.20** The work shall be executed and measured as per metric dimensions given in the Schedule of Quantities, drawings etc. (FPS units wherever indicated are for guidance only).
- 16.21** The contractor shall carefully survey the site and identify the trees which are coming within the alignment of the building and also the trees which are required to be cut which may be falling within the space required for forming slopes/ benching, etc. for excavation of the basements and submit these details to the Engineer-in-Charge. The DDA shall arrange permission for cutting of trees from the competent authority and get them cut separately from other agency.
- 22.** The rate shall be inclusive of working under water and adverse conditions and including pumping out or bailing out water, unless otherwise specified in the nomenclature. This will include water encountered from any source such as rains, floods, sub-soil water table or any cause whatsoever.

- 16.23** Factory made materials shall be procured only from reputed manufacturers or their authorized dealers.
- 16.24** Wherever work is specified to be done or material procured through specialized agencies, their names shall be got approved well in advance from Engineer-in-charge. Failure to do so shall not justify delay in execution of work. It is suggested that immediately after award of work, contractor should negotiate with concerned specialized agencies and send their names for approval to Engineer-in-charge. Any material procured without prior approval of Engineer-in-charge in writing is liable to be rejected. Engineer-in-charge reserve his right to get the materials tested in laboratories of his choice before final acceptance.
- 16.25** Before start of work, the contractor keeping in view that space available is limited, shall furnish a construction yard layout, specifying area for construction, positioning of machinery, material yard, cement and other storage, steel fabrication yard, site laboratory, water tank, conveyers belt, etc. and seek formal approval of the Engineer-in-Charge. The contractor shall not stack building material/ malba on others land or road or on the land owned by any other authority and he shall face penal action as per the rules, regulation and bye-laws of the said body or authority. The Engineer-in-Charge shall be at liberty to recover the amount due but not paid to the concerned authorities on the above account from any amount due to the contractor including amount of the security deposit or retention money in respect of this contract or any other contract.
- 16.26** Area for the labour huts will be located in consultation with Engineer-in-Charge as limited site is available. Bidders shall quote their rates accounting for above mentioned provisions for smooth execution of the project and nothing extra shall be paid on this account.
- 16.27** The contractor shall take all necessary measures for the safety of traffic during construction and provide, erect and maintain such barricades, including signs, marking, flags lights and flagman as necessary, at either end of the excavation/embankment and at such intermediate points, as directed by the Engineer-in-charge for the proper identification of construction area. He shall be responsible for all damages and accidents caused due to negligence on his part.
- 16.28** A detailed program in the form network diagram is to be submitted to the Engineer-in-Charge within 10 days of date of Letter of Intent. The program chart should include the following:
- a) Descriptive note explaining sequence of various activities.
  - b) Network (PERT/CPM)
  - c) Program for procurement of materials by the contractor.
  - d) Program of mobilization of machinery/equipment.
  - e) Labour deployment schedule
  - f) Cash flow statement.



The progress will have to be updated weekly on this detail programme and submitted to the Engineer-in-Charge on weekly basis.

- 16.29** The submission for approval by the Engineer-in-Charge of detailed programs or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibility under the contract. This is without prejudice to the right of the Engineer-in-Charge to take action against contractor as per terms and condition of the agreement.
- 16.30** In order to adhere to the program, the work may have to be carried out in more than one shift and no claim on this account shall be entertained. Contractor will give advance notice in writing to Engineer-in-Charge for doing any work in odd hour.
- 16.31** Contractor shall take up the design work for the project with 10 days of the award of work and will submit the designs duly proof checked with 20 days of the date of start of work.
- 16.32** Contractor shall be allowed mobilization at site within 30 days from the date of issue of Letter of Commencement for the work. During this period contractor will mobilize plant & equipment including testing and commissioning and complete other preliminaries like construction of site.
- 16.33** The contractor shall take average 10 photographs of 5" x 8" of the work every fortnight as directed by the Engineer-in-Charge and supply two sets. Nothing extra shall be payable to the contractor on this account.
- 16.34** Some restrictions may be imposed by the security staff/ Delhi police on the working and for movement of labour, materials etc.
- i) The movement of trucks and vehicles shall be regulated in accordance with rules and regulations as approved by competent authority.
  - ii) The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on this account.
  - iii) No claim whatsoever will be entertained by the department on account of any, restrictions imposed by the security agencies in execution of work.
- 16.35** The actual received, issue and consumption of aluminum on work shall be regulated and proper accounts maintained at site. The theoretical consumption of aluminum shall be worked out as per design or as authorized by Engineer-in-charge. Over this theoretical quantity 1% plus/minus shall be allowed as variation due to wastage being more or less.

### 16.36 Approval of Samples of Materials

**16.36.1** The contractor shall submit to the Engineer-in-Charge samples of all materials/ to be used in the work for approval before bringing bulk supplies and before commencing the work. These approved samples shall be preserved and retained in the custody of the Engineer-in-Charge as standard of materials till the completion of the work. The cost of such samples shall be borne by the contractor and nothing shall be payable on this account.

**16. 36.2** Sub-standard Material / Work: In case any material / work is found sub-standard the same shall be rejected by the Engineer-in-Charge and the same shall be removed from the site of work within 48 hours, failing which the same shall be got removed by the Engineer-in-Charge at the risk and cost of the contractor without giving any further notice and time.

### 16.37 Testing of Materials:

All materials shall be subjected to quality tests.

i). Even ISI marked materials may be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/material. Whenever ISI marked materials are brought to the site of work the contractor shall, if required by the Engineer-in-Charge, furnish manufacturer test certificate or test certificate from approved testing laboratory to establish that the material procured by the contractor for incorporation in the work satisfy the provisions of IS Codes relevant to the material and/or the work done.

ii). The contractor shall arrange carrying out of all tests required from approved laboratory as indicated in the table below..

<p><b>1)</b> Test for which no facility available in DDA labs like Testing aluminum, Tensile Polyester Fabric Panel, Structural Cables and Fittings/ Accesories.</p>	<p><b>i)</b> 75% of the test to be got conducted in Govt. lab like PWD,CPWD, NTH, IIT, CRRI, CERI, NCCM, RTC &amp; FRI Dehradun.</p> <p><b>ii)</b> 25% in other approved labs like Sri Ram Institute, Delhi Test House, Spactro Analytical Lab, for which uniform allocation to be made.</p>
<p><b>2)</b> Test for which facilities are available in Q.C./Zonal lab</p>	<p><b>i)</b> 75% tests in Field/Zonal lab</p> <p><b>ii)</b> 15% in Q.C. lab of D.D.A.</p> <p><b>iii)</b> 10% in other labs preferably in Govt. labs like PWD/CPWD.</p>

The testing charges for these tests and cost of sample, packing of sample, cartage etc. Shall be borne by the contractor.

### 16.38 Insurance

Before commencing the execution of work, the Contractor shall, without in any way limiting his obligations and liabilities, insure at his own cost and

expense against any damage or loss or injury, which may be caused to any person or property, at site of work. The Contractor shall obtain and submit to the DDA proper Contractor All Risk Insurance Policy for an amount 1.25 times the contract amount for this work, with DDA as the first beneficiary. The insurance shall be obtained in joint names of DDA and the Contractor (who shall be second beneficiary). Also, he shall indemnify the Department from any liability during the execution of the work. Further, he shall obtain and submit to the DDA, a third party insurance policy for maximum Rs.10 lakh for each accident, with the DDA as the first beneficiary. The insurance shall be obtained in joint names of DDA and the Contractor (who shall be second beneficiary). The Contractor shall, from time to time, provide documentary evidence as regards payment of premium for all the Insurance Policies for keeping them valid till the completion of the work. The Contractor shall ensure that similar Insurance Policies are also taken by his Sub-Contractors/ specialized agencies. The Contractor shall however be responsible, to the Department, for any claim or loss resulting from the failure of his Sub-Contractors/ specialized agencies in obtaining such Insurance Policies. Without prejudice to any of its obligations and responsibilities specified above, the Contractor shall within 10 days from the date of letter of acceptance of the tender and thereafter at the end of each quarter submit a report to the Department giving details of the Insurance Policies along with Certificate of these insurance policies being valid, along with documentary evidences as required by the DDA. No work shall be commenced by the Contractor unless he obtains the Insurance Policies as mentioned above. Also, no payment shall be made to the Contractor on expiry of insurance policies unless renewed by the Contractor. Nothing extra shall be payable on this account. No claim of hindrance (or any other claim) shall be entertained from the contractor on these accounts).

#### **16.39 Codes of Practice**

The tensioned membrane shall conform to the current relevant standards and to the requirements of the statutory authorities. Relevant publications of particular importance are as follows:

- 1) IS 875 : Indian Wind Code
- 2) BS 8118: Structural Use of Aluminum
- 3) AS 1441: Method of Test for Coated Fabrics
- 4) AS 1530: Methods for Fire Tests on Building Materials, Components and Structures
- 5) AS 2001: Methods of Test for Textiles

#### **16.40 Packing**

The contractor shall be wholly responsible for employing particular measures to prevent any damage occurring to the fabric coating and/or the base cloth. The fabric shall be folded in such a manner as to minimize sharp creases and folds. All materials shall be packed in substantial crates and shall be designed to protect the materials contained against hazard both during transit and whilst stored at the site.

## **17.0 BACKGROUND INFORMATION & SCOPE OF WORK**

### **17.1 Commonwealth Games Project Delhi 2010**

The Commonwealth games is games are one of the largest international sporting events in the World..

The Delhi Development Authority is responsible for the overall planning, overseeing and executing of all the elements to produce a harmonized and triumphant Commonwealth games village. The success of the Games will project India's flourishing and unlimited capabilities and present it as a significant hub for sports, technology, education and tourism.

The Commonwealth Games 2010 will take place in October 2010. However, the fit-out including installation of all temporary and permanent facilities shall be completed three months ahead of the Opening Ceremony. Detailed timelines and milestones are provided in the tender document.

### **17.2 Location of the Games Venue**

The games venues are distributed in and around Delhi. This proposal is however for Commonwealth Games Village near Akshardham Temple off NH-24 Delhi.

### **17.3 Scope of Work**

DDA invites the Respondent to provide the goods and services required for the Marquees and associated works package for the "Commonwealth Games Village".

DDA is seeking to contract the services of suitably qualified, experienced and capable companies or consortia to design, supply, deliver, install, commission, maintain, decommission and remove (reinstate wherever necessary) these goods for the Commonwealth Games Delhi 2010.

The quantities, types, locations of marquees and associated works required by DDA are described in detail in Bill of quantities. Additional information is provided throughout this document. It is expected that the Temporary Structures are comprised of following types:

**Type A.** Structure module 15m curve span x 3m height, complete with all services and as per detail technical specifications. The structures shall be of best quality & shall be used for prime areas.

There is also a option of custom build structures as per the concept design of the architect which the contractor can follow (detail drawings attached)

**Type B.** Structure module 40m/ 30m/ 20m span x 4m height, complete with all services and as per detail technical specifications. The structures shall be of best quality & shall be used for prime areas.

- Type C.** Structure module 30m/ 20m span x 4m height, complete with all services and as per detail technical specifications. The structures shall be of good quality & shall be used for operational areas.
- Type D.** Structures generally used for Bag & wand searches, Police check posts, VAHO etc without AC. These shall have basic services as per detail technical specifications.
- Type E.** Internal modular partitioning work inside permanent structures complete with carpeting, false ceiling work as per detail technical specifications. The space shall be of best quality & shall be used for prime areas.
- Type F** “Garden or marquee” small structures commonly used for basic shelter or kiosks. These shall have basic services like lighting, power & rain water discharge systems as per detail technical specifications.
- Type G.** Miscellaneous overlays works as per specifications & Schedule inside the games village as per the details provided in the document.

Whilst DDA has prepared this detailed Scope of Works to the best of its ability, Respondents are encouraged to provide proposals based on other proven, innovative solutions. The DDA holds the right to accept or reject any proposal.

The scope of the planned contract comprises the supply and installation of various types of temporary structures including but not limited to:

- Design services for specialized structures i.e. International Zone, Transport Mall, Dining hall, operational Zone, etc & athlete support areas inside permanent buildings (mainly basement)
- Getting the structural designs proof checked.
- Getting relevant approvals from the authorities i.e fire, department, wireless & telecom department, etc.
- Designing & providing fire alarm, fire fighting system as per norms of the country.
- Designing & providing lighting, power supply, air-conditioning, plumbing system as per specifications in the document.
- Shipping/ transportation of installation elements and equipment to Delhi.
- Material handling at any port in India / or Airport at Delhi
- Storage of materials in a store / yard if appropriate.
- Delivery of materials to venues in Delhi.
- Installation of temporary structures
- Facility maintenance during hire period.
- Dismantling and removal from site at the end of the hire period.
- Any necessary rectification for damage/ loss or reinstatement (“planned reinstatement”)

The contractor shall bear all and any cost associated with the aforementioned scope including but not limited to:

- Shipping/ transportation charges
- Mobilization and repatriation of staff
- Management and administrative cost
- Rental of local equipment and store / yard
- Local material transfer charges
- Accommodation charges.

The Scope of Works shall include all labour, materials, plant and equipment necessary to carry out the above. Notwithstanding the list of inclusions, the Contractor shall include any work which, in its experience, is necessary for a major international sporting event such as the Commonwealth Games except those elements identified in Section “Work by others” of this document.

#### **17.4 General Description of Buildings:**

##### **17.4.1 International Zone:**

The International Zone is the ‘gathering’ place within the Commonwealth Games Village. It shall accommodate commercial and recreational services for visitors and residents of the Village. The commercial area is required for residents to purchase essential items without leaving the Village. Facilities for CGA Welcome Ceremonies and Media interviews shall be provided in the International Zone.

The elements of the International Zone shall be of a very high standard. The image and ‘Look’ of the International Zone must be carefully considered, and the appropriate treatment of all spaces and structures is required to enhance the visual experience of this area.

DDA is providing a generally level ground & the contractor is required to provide true level with Type A structure complete with all services and functional toilets as described in the rest of the document.

##### **17.4.2 Transport Mall**

The Athlete Transport Mall is the primary transport facility for Athletes and Officials. All bus transport to and from the competition and training Games village sites will be facilitated at this location. The Transport Mall houses the Village Accreditation Center. The Village Accreditation Centre is the facility where Athletes and Officials will obtain their accreditation for the Games and where luggage and personal items are security screened prior to entering the Village and being transported to their accommodation.

DDA is providing a generally level ground & the contractor is required to provide true level with Type A structure complete with all services and functional toilets as described in the rest of the document.

##### **17.4.3 Main Dining**

The Main Dining Hall is the primary Dining facility for Athletes and Officials in the Village. The Dining hall shall be functional round the clock & serve

variety of foods & beverages. The Dining Hall comprises of Athlete dining hall, Workforce dining hall & kitchen.

DDA is providing a generally level ground & the contractor is required to provide true level with Type B structure complete with all services and functional toilets as described in the rest of the document. The Catering Contractor of the Organising Committee Delhi 2010 will be Designing & operating the Main dining. The contractor has to accommodate all the requirements for the specialized equipments of the Catering Contractor (power, water supply, drainage). The kitchen work will be carried out in following stages:

1. The contractor has to get all services network laid on level ground as per the requirement of the catering contractor and all outlets capped.
2. The services will be tested and approved by the catering contractor.
3. The contractor will provide cassette floor/ conc. floor as per the specification of catering contractor.
4. The catering contractor will place the kitchen equipments in position on the floor.
5. The contractor shall put up the super structure only after approval of the catering contractor.
6. The catering contractor will do internal partitioning work inside the kitchen only.
7. The catering contractor will provide extraction ductwork inside the kitchen over cooking equipments only.
8. The contractor has to assist catering contractor getting ductwork to outside by means of special wall panels.

#### **17.4.4 Operational zone I & II**

The operation zone will accommodate all management offices for the Village 'Back of House' administration facilities. The operational zone will coordinate all Village operations, administration and procedures. The operational zone I is basically an entry check point for all logistics & workforce, with office area and open container yard. The operational zone II is the main hub of operations with central warehousing, security command center, technology center, house keeping, waste transfer etc.

DDA is providing a generally level ground & the contractor is required to provide true level with Type C structure complete with all services and functional toilets as described in the rest of the document.

#### **17.4.5 Resident Centers**

Resident Centres provide a range of services for the residents of the Village, including entertainment, housekeeping, general information and problem resolution.

The resident centers are proposed in the basement of the residential blocks. DDA will provide a level floor with power supply, water supply, drainage line at one point & the contractor is required to provide Type E structure complete with all services and functional toilets as described in the rest of the document.

In cases where water supply, drainage is not possible contractor has to make alternate provisions for the same.

#### **17.4.6 Polyclinic & Dope Control Center**

The Polyclinic shall be a purpose built medical facility for the exclusive use of the Village residents. Complete with OPD area, consultation chambers, Physiotherapy, x-ray, ultrasound, lab facility & 10 bed ward along with dope control center.

The Polyclinic & Dope control center is proposed in the lower ground floor of the club building in the residential block. DDA will provide a level floor with power supply, water supply, drainage line at one point & the contractor is required to provide Type E structure complete with all services and functional toilets as described in the rest of the document. In cases where water supply, drainage is not possible contractor has to make alternate provisions for the same.

#### **17.4.7 Casual Dining**

The Casual Dining Hall provides an alternative and different dining experience for Athletes and Officials. It also provides an overflow to the Main Dining at peak times. (Casual dining does not operate a 24 hour service but helps to alleviate congestion at the Main Dining, generally at breakfast and dinner times). The Casual Dining Hall should accommodate approximately 100-200 people.

The Casual Dining is proposed on the upper ground floor of the club building in the residential block. DDA will provide a level floor with power supply, water supply, drainage line at one point & the contractor is required to provide Type E structure complete with all services and functional toilets as described in the rest of the document. In cases where water supply, drainage is not possible contractor has to make alternate provisions for the same.

#### **17.4.8 Sports Information Center**

A Sports Information Centre is required within the Residential Zone for CGAs to obtain sport information, transport support/information, results/schedules etc and general support.

The Sports Information Center is proposed on the upper ground floor of the club building in the residential block. DDA will provide a level floor with power supply, water supply, drainage line at one point & the contractor is required to provide Type E & Type B structure complete with all services and functional toilets as described in the rest of the document. In cases where water supply, drainage is not possible contractor has to make alternate provisions for the same.



#### **17.4.9 CGA Services Center**

The CGA Services Centre is a central communication and service centre provided for all CGAs. It provides information and facilitates problem resolution for Chefs and Officials of the CGAs.

The CGA Services Center is proposed on the upper ground floor of the club building in the residential block. DDA will provide a level floor with power supply, water supply, drainage line at one point & the contractor is required to provide Type E structure complete with all services and functional toilets as described in the rest of the document. In cases where water supply, drainage is not possible contractor has to make alternate provisions for the same.

#### **17.4.10 Religious Center**

A Religious Centre needs to be provided for residents for prayer, counseling and meditation. The religious center is proposed on the upper deck in the residential zone. The religious center will have atleast 4 prayer halls, 1 common consulting chamber/ office, ablution area & functional toilets.

DDA is providing a level floor & the contractor is required to provide Type B structure complete with all services and functional toilets as described in the rest of the document.

#### **17.4.11 Venue Accreditation Help Office (VAHO)**

VAHO's are required at all entry points to the village/ various zones. Each VAHO will have a weatherproof lockable structure with floor and all services for office & help desk & a covered, not lockable structure, without floor/ wall with power supply for vehicle screening.

DDA is providing a level ground/ floor & the contractor is required to provide Type D structure complete with all services as described in the rest of the document.

#### **17.4.12 Pop up Kiosks**

Pop up kiosks are required at some places inside the village. These shall be weather proof, not lockable & shall have provision of power nearby. These can be used for vending machines, street food carts, etc.

DDA is providing a level ground/ floor & the contractor is required to provide Type F structure as described in the rest of the document.

#### **17.4.13 Police Posts**

Police posts are required at 3 main entry points to the village. The contractor is required to provide 15 sq. m each of weatherproof, lockable structure for this purpose

DDA is providing a level ground/ floor & the contractor is required to provide Type D structure complete with all services and functional toilets as described in the rest of the document.

#### **17.4.14 Drivers Lounge**

Drivers lounge are required at the parking areas in the village. The contractor is required to provide weatherproof, lockable structure for this purpose

DDA is providing a level ground/ floor & the contractor is required to provide Type D structure complete with all services and functional toilets as described in the rest of the document.

The Scope of Works shall be in accordance with the other sections, and in general, can be described as follows:

#### **17.5.1 Framed marquees and marquee structures (“Temporary Structures”)**

The work for Temporary Structures include:

- Supply of Temporary Structure and associated equipment specified;
- Delivery to points of installation.
- Installation and erection of all Temporary Structure as specified in the document.
- Installation of all other related fixtures including, but not limited to, general lighting, air conditioning, flooring, floor coverings and ramps.
- Removal of the above from Venues, cleaning and reinstatement of venue affected by works above.

#### **17.5.2 Air Conditioning Systems**

Air Conditioning is required for certain Temporary Structure (defined in “Electrical & Mechanical services”). The work relating to the cooling systems required include:

- Design and documentation of systems that are fit for purpose.
- Supply of prefabricated systems based on design and documentation.
- Delivery of systems to points of installation.
- Coordination with in-ground services such as gas, sewer, storm water, fire mains, water supply, service road lighting and telephone services prior to digging, trenching or coring.
- Installation of the systems and associated equipment such as support frames, brackets, wiring looms, control equipment, support catenary wires, flexible and/ or rigid ductwork, high-pressure hoses/ fittings and other materials and consumables that are required to enable them to be fully functional and compliant with all relevant statutory requirements.
- Commissioning, testing and certification of the systems to the satisfaction of the Engineer In-charge’s Representative.
- Decommissioning and rendering safe for removal of all installed systems.
- Removal of the above from Venues, cleaning, disposal of refuse generated and reinstatement of Venue affected by works above.
- For other scope of work please refer “Electrical & Mechanical services”.

#### **17.5.3 General lighting**

Lighting is required for Temporary Structure (defined in “Electrical & Mechanical services”) The work relating to the lighting systems required include:

- Design and documentation of lighting systems that are fit for purpose.
- Supply of prefabricated systems based on design and documentation.
- Delivery of systems to points of installation.

- Coordination with in-ground services such as gas, sewer, stormwater, fire mains, water supply, service road lighting and telephone services prior to digging, trenching or coring.
- Installation of the systems and associated equipment such as wiring, switches, sub-boards, circuit breakers, earthing, weather protection, support frames, brackets and other materials and consumables that are required to enable them to be fully functional and compliant with all relevant statutory requirements.
- Commissioning, testing and tagging/ certification of the systems to the satisfaction of the Engineer In-charge.
- Decommissioning and rendering safe for removal of all installed systems.
- Removal of the above from Venues, cleaning, disposal of refuse generated and reinstatement of Venue affected by works above.
- For other scope of work please refer “Electrical & Mechanical services”.

#### **17.5.4 Furniture, fittings and equipment (FFE)**

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#### **17.5.5 Temporary partitions**

The work for temporary partitions include:

- Supply of temporary partition and accessories (partition systems) such as doors, stabilising fins, etc.
- Delivery to points of installation.
- Installation of temporary partitions and accessories.
- Certification (rendering safe) of the systems to the satisfaction of the Engineer In-charge’s Representative.
- Removal of the above from Venues, cleaning, disposal of refuse generated and reinstatement of Venue affected by works above.

#### **17.5.6 Flooring (subfloors) and floor coverings**

The work for temporary flooring and floor coverings include:

- Design and documentation of flooring (subfloor) systems that are fit for purpose.
- Supply of prefabricated systems (subfloors and coverings) based on design and documentation.
- Delivery of systems to points of installation.
- Installation of the systems and associated equipment (where applicable) such as fixing plates, bolts/ nuts, screws, support frames, brackets and other materials and consumables that are required to enable them to be fully functional and compliant with all relevant statutory requirements.
- Certification (rendering safe) of the systems to the satisfaction of the Engineer In-charge.
- Removal of the above from Venues, cleaning, disposal of refuse generated and reinstatement of Venue affected by works above.

#### **17.5.7 Hard standing/ Paved areas (Ground improvement)**

The work for ground improvement include:

- Design and documentation of ground protection systems that are fit for

purpose.

- Consolidation of sub base with proper compaction.
- Supply of prefabricated/ precast systems based on design and documentation.
- Delivery of systems to points of installation.
- Installation of the systems and associated equipment (where applicable) such as fixing plates, bolts/ nuts, and other materials and consumables that are required to enable them to be fully functional and compliant with all relevant statutory requirements.
- Certification (rendering safe) of the systems to the satisfaction of the Engineer In-charge.
- Removal of the above from Venues, cleaning, disposal of refuse generated and reinstatement of Venue affected by works above.

#### **17.5.8 Toilets**

Toilets shall be required for Temporary Structure (defined in Technical Specifications). The work relating to the toilets include:

- Design and documentation of toilet systems that are fit for purpose.
- Supply of prefabricated systems or built in situ units based on design, documentation and approval of engineer in charge.
- Delivery of systems to points of installation.
- Coordination with in-ground services such as gas, sewer, storm water, fire mains, water supply, service road lighting and telephone services prior to digging, trenching or coring.
- Installation of the systems and associated fittings, fixtures & plumbing systems and other materials and consumables that are required to enable them to be fully functional and compliant with all relevant statutory requirements.
- Connecting water supply from main lines provided by DDA to individual points with the help of suitable underground piping network.
- Connecting sewerage/ rain water from building to main lines provided by DDA with the help of suitable underground piping network.
- Where required self contained toilet containers may be provided, serviced & maintained.
- Commissioning, testing and tagging/ certification of the systems to the satisfaction of the Engineer In-charge.
- Decommissioning and rendering safe for removal of all installed systems.
- Removal of the above from Venues, cleaning, disposal of refuse generated and reinstatement of Venue affected by works above.
- For other scope of work please refer "Technical Specifications".

#### **17.5.9 Miscellaneous Overlay works**

Miscellaneous overlay works shall be required inside the venues like Steam-sauna units, Acoustical Partitions, fencing, security watch towers, perimeter lighting, etc. (defined in Technical Specifications). The work relating to the miscellaneous works include:

- Design and documentation of systems that are fit for purpose.
- Supply of prefabricated systems based on design, documentation and

approval of engineer in charge.

- Delivery of systems to points of installation.
- Coordination with in-ground services such as gas, sewer, stormwater, fire mains, water supply, service road lighting and telephone services prior to digging, trenching or coring.
- Coordination with the structural design of existing structure to assure the add on systems are within permissible limits.
- Installation of the systems and associated fittings, fixtures and other materials and consumables that are required to enable them to be fully functional and compliant with all relevant statutory requirements.
- Commissioning, testing and tagging/ certification of the systems to the satisfaction of the Engineer In-charge.
- Decommissioning and rendering safe for removal of all installed systems.
- Removal of the above from Venues, cleaning, disposal of refuse generated and reinstatement of Venue affected by works above.
- For other scope of work please refer “Technical Specifications”.

#### **17.5.10 Additional requirements**

The following additional requirements shall apply:

- For complex systems or layouts, or as directed by the Engineer In-charge, the Contractor shall prepare and provide to DDA “For Installation” drawings, shop drawings and/ or detailed setout drawings hard copy and in AutoCAD 2004 format (if applicable).
- For Temporary Structures, or as directed by the Engineer In-charge the contractor shall provide structural calculations duly proof checked, fire rating certificate, wind load test certificate etc.
- The structure shall be approved by the DDA after checking / scrutiny of these calculations / documents.
- Maintenance of all items and equipment supplied during the lead-up to the Games and during the Games (this should form part of the Contractor’s maintenance plan agreed with the Engineer In-charge); and
- Repair and/ or replacement any equipment that may have become damaged during the lead-up to the Games and during the Games. For maintenance staff please refer ‘Technical Specifications’.

#### **17.5.11 Internal Electrical Installation & Power Outlets**

##### **17.5.11.1 General**

- License holder from abroad for similar nature of work can be associated as sub-contractor for this work. In case Indian sub-agency is engaged for electrical work, the electrical contractor of appropriate class enlisted with CPWD / DDA shall be eligible for executing the work. MOU between associated agency & the main contractor shall be signed. Credentials of the associated electrical firm are to be produced along with the tender.
- The contracting agency shall operate and maintain all the installation till the end of Commonwealth Games 2010 including supply of necessary maintenance material by deploying required skilled Manpower, Supervisors, and Engineers as required, to the satisfaction of Engineer-in-Charge. The details should be given by the contracted agency in the

enclosed proforma. The cost of such operation and maintenance shall be included in the quoted rate of respective work.

- On completion of the Games, the entire installation shall be dismantled and removed and site to be restored to the original position.

#### **17.5.11.2 Scope of Work**

Scope of work includes Supply, Installation, Testing, Commissioning, Maintenance, Removal & Reinstatement of Electrical installation as detailed below:

- General Lighting
- Architectural Lighting
- Flood Lighting / Spot Lights - wherever required
- Emergency and Exit Lighting
- External and Precinct Lighting - wherever required
- Earthing
- General / Special Purpose Power Outlets
- Temporary Cable Pathway for Power, Communication etc.
- Spare raceways to be provided neatly aligned inside the structures to accommodate all CCTV, security, communications, PA system cables as per drawing enclosed. (cabling work done by other agencies)
- The LT power supply to the International Zone and Operational Zone-I, shall be made available at one point (**from ESS-I**) in an outdoor type feeder pillar along with switch gears by DDA as shown in the drawing. Further distribution from this point shall be done by the contracted agency.
- In case of Dining Hall, Operational Zone-II and Transport Mall, the LT supply shall be made available (**from ESS-II**) to the contracted bidder at one point in an outdoor type feeder pillar by DDA as shown in the drawing. Further distribution shall be done by the contracted agency.
- Suitable UPS system should be provided to feed 100% light load for Dining Hall and 50% light load in Operational Zone-II, Transport Mall and international Zone.

**Please Note: All Street and Path lighting shall be provided by D.D.A.**

#### **17.5.12 Air Conditioning & Ventilation**

##### **17.5.12.1 General**

- License holder from abroad for similar nature of work can be associated as sub-contractor for this work. In case Indian sub-agency is engaged for Air Conditioning work, the work shall be executed by a enlisted / specialized contractor as per CPWD Works Manual 2007. MOU between associated specialised agency & the main contractor shall be signed. Credentials of the associated electrical firm are to be produced along with the tender. Credentials for specialized firms are to be produced along with the tender.
- The contracting agency shall operate and maintain all the installation till the end of Commonwealth Games 2010 including supply of necessary maintenance material by deploying required skilled Manpower, Supervisors, and Engineer as required, to the satisfaction of Engineer-in-Charge. The details should be given by the contracted agency in the enclosed proforma. The cost of such operation and maintenance shall be included in the quoted rate of respective work.

- On completion of the Games, the entire installation shall be dismantled and removed and site to be restored to the original position.

#### **17.5.12.2 Scope of Work**

Scope of work includes Supply, Installation, Testing, Commissioning, Maintenance, Removal & Reinstatement of Air Conditioning System as detailed below:

- For International Zone: Chilled water shall be made available at one point near International Zone. Further distribution from this point shall be done by the agency for Temporary Structure.
- For Operational Zone-II, Dining Hall and Transport Mall chilled water shall be made available near each temporary structure by DDA and further distribution shall be made by the contracted agency.
- No chilled water supply shall be made available in Operational Zone-I, Resident Center / CGA Services Centre / Sports Information Centre / Religious Center / Polyclinic. In these areas air cooled Air Conditioning system shall be provided by the contracted agency.
- Power supply for International Zone for Air Conditioning purpose shall be made available in an outdoor feeder pillar near International Zone. Further distribution shall be done by the contracted agency.
- Power supply for Operational Zone-II, Dining Hall and Transport Mall shall be made available (**from ESS-II**) to the contracted bidder at one point in an outdoor type feeder pillar by DDA as shown in the drawing. Further distribution shall be done by the contracted agency.

#### **17.5.13 Fire Alarm, Fire Fighting & Fire Extinguisher**

##### **17.5.13.1 General**

- License holder from abroad for similar nature of work can be associated as sub-contractor for this work. In case Indian sub-agency is engaged for the above work, the work shall be executed by enlisted / specialized contractor as per CPWD Works Manual 2007. In this regard MOU with the main contractor shall be signed by DDA before acceptance of tender. Credentials of the specialized firm are to be produced along with the tender.
- The contracting agency shall operate and maintain all the installation till the end of Commonwealth Games 2010 including supply of necessary maintenance material by deploying required skilled Manpower, Supervisors, and Engineer as required, to the satisfaction of Engineer-in-Charge. The details should be given by the contracted agency in the enclosed proforma. The cost of such operation and maintenance shall be included in the quoted rate of respective work.
- On completion of the Games, the entire installation shall be dismantled and removed and site to be restored to the original position.

#### **17.5.13.2 Scope of Work**

Scope of work includes Supply, Installation, Testing, Commissioning, Maintenance, Removal & Reinstatement of Fire Detection and Fire Alarm System along with Fire Extinguishers as detailed below:

- Fire clearance certificate to be obtained / arranged from the Delhi Chief Fire Officer by the agency at their level before commissioning the installation in Temporary Structure.
- A comprehensive fire detection / fire alarm / fire fighting / extinguisher scheme with schematic diagram shall be prepared and got approved from office of Delhi Chief Fire Officer before commencement of the work
- After completion of the work. The entire installation shall be tested and got cleared from the CFO.

**Note : Yard hydrants in the area shall be provided by D.D.A.**

#### **17.5.14 External Lighting of Embankment along Bund Road**

##### **17.5.14.1 General**

- License holder from abroad for similar nature of work can be associated as sub-contractor for this work. In case Indian sub-agency is engaged for electrical work, the electrical contractor of appropriate class enlisted with CPWD / DDA shall be eligible for executing the work. MOU between associated agency & the main contractor shall be signed. Credentials of the associated electrical firm are to be produced along with the tender.
- The contracting agency shall operate and maintain all the installation till the end of Commonwealth Games 2010 including supply of necessary maintenance material by deploying required skilled Manpower, Supervisors, and Engineers as required, to the satisfaction of Engineer-in-Charge. The details should be given by the contracted agency in the enclosed proforma. The cost of such operation and maintenance shall be included in the quoted rate of respective work.
- On completion of the Games, the entire installation shall be dismantled and removed and site to be restored to the original position.

##### **17.5.14.2 Scope of Work**

Scope of work includes Supply, Installation, Testing, Commissioning, Maintenance, Removal & Reinstatement Electrical installation as detailed below:

- Suitable outdoor type of fittings (IP-66) to give required illumination level.
- Suitable foundation / structure / pole for mounting the fittings.
- Necessary XLPE armoured cabling for the above job including cabling from ESS-II to various Feeder Pillars.
- Laying of cables
- Earthing
- Feeder pillars



### 17.5.15 Proforma for Deployment of Operational & Maintenance Staff for E&M Services

S.No.	Description	Skilled / Semi-Skilled / Unskilled	No. of Persons	Remarks
A).	Providing, Installation, Testing and Commissioning of Internal Electrical Installation and Power Outlets.			
i).				
ii).				
iii).				
B).	Providing, Installation, Testing and Commissioning of Air Conditioning & Ventilation			
i).				
ii).				
iii).				
C).	Providing, Installation, Testing and Commissioning of Fire Alarm, Fire Fighting and Fire Extinguisher.			
i).				
ii).				
iii).				
D).	Providing, Installation, Testing and Commissioning of External Lighting of Embankment along Bund Road			
i).				
ii).				
iii).				

## 17.6 PRELIMINARIES

### 17.6.1 WORKS AGREEMENT MANAGEMENT

DDA's Engineer-in-charge is authorized to liaise with the Contractor and coordinate all matters relating to the Works Agreement. The Contractor shall in turn nominate a Contractor Representative to act on behalf of the Contractor.

### 17.6.2 INTRODUCTION

The following Preliminaries include general information that will apply to all Contractors at all Venues. The Preliminaries cover a range of venue conditions and housekeeping items that are standard industry practice for similar, like scale, multi-sport and multi venue events. Respondents must understand, analyse and take into account the Preliminaries when submitting, amongst other things, prices when preparing its Proposal to this document. The Contractor is deemed to have made all necessary allowances in its pricing for the Preliminaries.

### **17.6.3 OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENT (OHSE)**

#### **General**

Of all the aspects involved in the provision of the Works, safety and environmental consciousness are of paramount importance.

The Contractor has a duty of care, in accordance with the relevant health and safety legislation, environmental legislation and other requirements, including the procedures outlined in the Works Agreement OHSE Plan (described in detail in the rest of this section), to all personnel performing Works. This duty of care extends to all consultants and subcontractors.

The Engineer In-charge will implement a 'three warning' system for notifying a Contractor of failure to carry out Works in an acceptable and safe manner. If such failure persists after one verbal notice, followed by one written notice, DDA reserves the right to require the removal of the offending personnel or Contractors from the project.

A Contractor deemed by the Engineer In-charge or DDA to have engaged in unsafe operations or to have inadequate measures to minimise adverse environmental impacts may have its engagement terminated and/ or excluded from future RFPs conducted by DDA.

#### **17.6.3.1 Objectives**

The Contractor must ensure that the Works carried out by its personnel is documented and controlled so as to prevent:

- Injury to personnel performing Works and injury to any other personnel working on any associated contract;
- Injury to members of the public;
- Injury to personnel employed by or associated with DDA or the Engineer In-charge; and
- Detrimental impact upon the environment.

#### **17.6.3.2 General duties of the Contractor**

The Contractor shall control and maintain effective control of the safety and environmental compliance of the Works, provide relevant record-keeping facilities and perform all inspections and audits necessary to demonstrate the conformance of the Works to the requirements of the Works Agreement. The Contractor shall offer for acceptance only Works that so conform.

The Contractor shall establish and maintain a system of records providing objective evidence that the requirements of the Works Agreement have been satisfied, and that the Contractor's controls and inspections are effective.

The Contractor agrees to DDA and/ or the Engineer In-charge conducting surveillance activities to obtain evidence of the implementation and effectiveness of the Works Agreement OHSE Plan throughout the execution of the Works and shall facilitate this surveillance. The Contractor shall rectify non-conformities found during surveillance activities by DDA or the Engineer In-charge.

No part of the Works Agreement OHSE Plan shall be interpreted to preclude or otherwise negate the OHSE requirements of any part of the Works Agreement, or the obligations of the Contractor pursuant to the Works Agreement including compliance with all relevant statutory legislations (or equivalent), regulations, codes of practice and industry standards.

The Contractor is responsible for ensuring the Works meet all technical and OHSE requirements of the Works Agreement and shall keep records of action taken. The Contractor shall advise the Engineer In-charge in writing of significant alterations required to installation or manufacturing techniques to ensure that specified requirements are met.

The Contractor shall ensure that the requirements of the Works Agreement OHSE Plan are included in any subcontracts entered into by the Contractor.

The Contractor shall provide an effective surveillance process for any part of the Works performed by a subcontractor, and may incorporate the subcontractor's activities into the Works Agreement OHSE Plan.

The Works Agreement OHSE Plan shall include or reference the OHSE plan and Job Hazard Analysis of each respective subcontractor.

The Contractor shall be responsible for the proper and adequate safeguarding of the Works area during both working and non-working hours. Where the Works area will be left unattended, the Contractor must take necessary steps to ensure the safety of all persons visiting the Works area including trespassers.

### **Occupational health**

The Contractor shall ensure all of its personnel are aware of safeguards against heat stress or similar trauma. Overexposure to the sun by personnel shall be discouraged. The Contractor shall take steps to ensure that proper clothing is worn and that sunscreen lotions are provided. The Contractor shall have in place an effective rehabilitation programme and procedures.

### **First aid and welfare facilities**

Personnel of Contractors must have access to first aid facilities that are appropriate to the nature and location of the Works. The Engineer In-charge may confirm the suitability of such facilities. Where such facilities are shared by arrangement with the Engineer In-charge, arrangements shall be made to ensure all site personnel are informed. The Contractor shall nominate a sufficient number of first aid providers in accordance with the relevant statutory requirements. At least one first aid provider shall be on-site during the performance of the Works. Photocopies of certificates must be supplied to the Engineer In-charge on request.

The Contractor is to assist the Engineer In-charge and DDA in the production of Venue emergency evacuation procedures & the Contractor must ensure all of its personnel are to be trained in its implementation. The Contractor shall keep a register of all first aid treatment provided during the performance of the Works.

### **Environmental protection**

The Contractor is responsible for preparing assessments of any hazards to health associated with substances or processes that it is likely to use. Copies of such assessments, together with details of precautions to be taken, are to be provided to the Engineer In-charge before any work with such substances or process commences.

The Contractor shall:

- Obtain the appropriate environmental licences and permits required for the Works prior to commencing Works;
- Have appropriate procedures in place to manage any contamination issues that arise in the course of the Works;
- Ensure all of its personnel are familiar with the procedures to be followed in the event of chemical release;
- Ensure material safety data sheets are available for all appropriate materials;
- Keep a record of all releases or detrimental impacts upon the environment that occur; and
- Ensure that appropriate containment, protection and remediation equipment is immediately available for use in the event of a release of hazardous materials into the environment.

### **Incident reporting and investigation**

All incidents requiring medical treatment or near misses of a life-threatening nature must be reported to the Engineer In-charge immediately. If the incident is a notifiable incident, a copy of the report to the relevant statutory authority should be attached. The Contractor must cooperate with DDA or the Engineer In-charge if either chooses to undertake an investigation following an accident or incident. In either event the Contractor must submit a fully detailed incident report within 24 hours.

The Contractor shall notify the Engineer In-charge immediately in the event of a dangerous occurrence.

Any injury, no matter how slight, must be reported to a first aid provider and treated immediately if treatment is required.

Any incident in which damage is caused to any property must be reported to the Engineer In-charge within 24 hours of its occurrence.

The Contractor shall keep a register of all incidents (whether notifiable incidents or otherwise) occurring during the execution of the Works.

The Contractor shall duly complete and submit to the Engineer In-charge, a Weekly Safety Report in a format to be agreed with the Engineer In-charge.

The Contractor's Weekly Site Safety Report shall be submitted no later than noon each Monday during the performance of the Works on site.

### **Protective clothing and equipment**

The Contractor shall provide each of its personnel engaged in the Works with, and require them to wear, protective clothing in accordance with the hazards identified in the Works Agreement OHSE Plan. Contractor's personnel must use any other protective clothing and/ or equipment as required or when instructed by the Engineer In-charge. Protective clothing and/ or equipment must be in good condition and used in accordance with the manufacturers' requirements.

The Engineer In-charge reserves the right to request removal, from any of the Venues, of any of the Contractor's personnel who do not comply.

### **Safety helmets**

Safety helmets must be worn where the risk assessment identifies the risk of head injury, particularly in situations where Contractors are working above others.

### **Eye protection**

All personnel engaged in or working close to any activity or operational equipment that may cause eye injury or produce flying particles must wear approved eye protection.

### **Noise**

The Contractor is responsible for preparing assessments of noise levels from plant, equipment and processes that it employs, for ensuring that noise levels are reduced at source, where practicable, and for ensuring that hearing protection is provided and worn where necessary. Where noise levels exceed 85 dBA, the Engineer In-charge is to be informed.

Consultation with the Engineer In-charge will not necessarily imply that approval will be given for the particular items of equipment.

Where approval is granted the Contractor shall be responsible for developing and implementing appropriate OHSE procedures to avoid placing any of its personnel at risk and to comply with the environmental requirements for the Works.

### **Protective clothing**

The Contractor's personnel must wear clothing suitable for the work they are doing. All personnel undertaking the Works must be provided with and wear high visibility vests. The Contractor's personnel are to be encouraged to wear appropriate eye protection, long-sleeved shirts, long trousers and use appropriate sunscreen to protect themselves from the sun. Footwear shall be suitable for the work being undertaken.

### **Road safety**

While carrying out activities on footpaths or near roads and moving traffic, personnel must wear appropriate road safety apparel at all times, including steel capped boots and fluorescent and reflective safety vests.

### **Visits**

The Engineer In-charge and DDA may visit the Contractor or its subcontractor(s) at a Venue, for any reason at any time. The Contractor shall assist with such visits and make available those records and its personnel necessary to satisfy DDA requirements.

## **17.7 SITE FACILITIES**

Unless provided elsewhere by DDA, in whole or in part, the Contractor shall be responsible for the provision and removal of all of its own site facilities. Such facilities shall include, but not necessarily be limited to: offices, lunch rooms, power, telecommunications, water and sewerage, as required by statutory authorities, award requirements, industry agreements, and the Contractor's requirements.

At Games Time, first aid facilities may be arranged by Organizing Committee Commonwealth Games Delhi 2010 for a Venue. However, at all times it remains the responsibility of the Contractor to provide its own first aid equipment and services.

DDA shall establish area(s) at certain Venues to be used as Contractors' compound(s) for the establishment of site facilities. These are shown on the drawings in Part F of this RFP. If space for site facilities is made available at a Venue, the Contractor shall submit to the Engineer In-charge for approval a summary list of the facilities it intends to use during the Works Period, within eight (8) weeks of appointment. This summary shall include plans showing the layout of any other known facilities (proposed or existing) within the area allocated by DDA.

As Contractors' compounds are likely to be small, Contractors shall plan around allowing a "just in time" approach, carefully scheduling its deliveries such that all materials, plant and equipment required for the site facilities are delivered directly to relevant locations.

## **17.8 DELIVERIES AND MDS**

The Venue will have different delivery procedures depending on the conditions at the Venue and its surrounding areas.

The Contractor shall educate itself on the procedures that apply to the Venue it will be working at and ensure that all of its personnel are educated on these procedures and adhere to them. Deliveries to Venues may be subject to security checks and searches. It is the responsibility of all Contractors to comply with all DDA policies, rules, regulations and procedures and/ or directions provided by the Engineer In-charge in this regard.

To assist in the coordination of all deliveries to Venues, DDA or the Engineer In-charge will operate a Master Delivery Schedule (MDS) throughout the Works Period.

The MDS logs all vehicle movements into and out of Venues. For delivery vehicles to gain access to Venues, delivery times, vehicle registration, goods

being delivered and details of accredited personnel accompanying the delivery must be provided in writing to DDA for inclusion on the MDS, at least 48 hours prior to arrival at a Venue.

DDA may refuse entry to vehicles not registered on the MDS and in such instances, any additional delivery, storage, demurrage, holding and other logistics related costs, shall be the Contractor's responsibility.

The Contractor shall ensure that it adheres to any MDS policies and procedures that are established.

## **17.9 VENUE ACCESS AND PARKING**

### **17.9.1 General**

The site access conditions vary between venues. The Contractor shall review the accessibility of the Venue and raise any concerns with the Engineer In-charge within six (6) weeks of appointment. Any modifications required will require the approval of the Engineer In-charge.

Prior to accessing any Venue, the Contractor is to notify the Engineer In-charge of proposed vehicular access, loading/ unloading locations and parking requirements and comply with any access instructions given.

The Contractor shall note that in some areas; usually within Venues, the use of vehicles or plant equipment may be prohibited or restricted. It may therefore be necessary to carry materials by hand across such areas. Where access is required across a restricted area, the Contractor shall provide at its own cost all necessary measures, to the satisfaction of DDA, to protect these areas against damage. If and where minimal damage is necessary, unavoidable or rational, the Contractor shall reinstate such planned damage in accordance with its reinstatement plan.

The speed limit for all types of vehicles at a Venue shall be in accordance with the instructions of the Engineer In-charge or as signposted. Lower speed limits are required in congested sections and through gates or when speed limit signs are posted.

### **17.9.2 Works Period**

Venue access and parking will be determined by DDA in consultation with the Contractor and provided to the Contractor based on operational requirements.

The Contractor shall gain access to the Venue through nominated roads or access paths within a Venue or as directed by the Engineer In-charge. All vehicles shall be parked in the designated vehicle parking areas and shall comply with any accreditation requirements, vehicle access, parking arrangements, MDS requirements and policies that may be developed by DDA.

In planning for access to areas of the Venue, the Contractor shall anticipate and allow for works by others occurring concurrently with the Works.

### **17.9.3 Games Time**

Venue vehicle access and car parking will be very limited at all Venues and access will be provided to the Contractor based on operational needs.

All vehicles accessing Venues during Games Time will be subject to security checks and clearances.

Where applicable, the Contractor shall comply with any accreditation, vehicle access and parking arrangements and policies that may be developed by Organising Committee Commonwealth Games Delhi 2010. Any vehicles of the Contractor or its personnel found parked outside of the designated car parking areas may be towed away at the Contractor's expense.

It is expected that access becomes more difficult during Games Time. The Contractor shall take this into consideration in its Proposal.

### **17.10 EXISTING SERVICES**

It is the responsibility of the Contractor to make itself aware of the location of all underground and overhead services and that the services are clear from proposed works, as necessary, prior to commencement.

The Contractor shall notify and seek direction from the Engineer In-charge immediately should it consider that certain services prevent the Works from being located as configured or sited.

The Contractor shall be responsible for the cost in making good any damage to services and resultant 'flow on' damages or losses, that occur whilst carrying out activities required under the Works Agreement. The Contractor shall notify the Engineer In-charge of any damage to services immediately.

### **17.11 ASSET PROTECTION**

The Contractor shall be responsible for providing security for its own plant and equipment provided in relation to the Works.

Contractor should install a perimeter security fence at all Venues to provide a base-level of security. Installation of this fence will commence at the start of the Exclusive Use Period for a particular Venue.

The Contractor shall work in cooperation and comply with all policies, rules, regulations and directions provided by the Engineer In-charge.

### **17.12 LOSS, DAMAGE AND REINSTATEMENT**

The Contractor shall take all necessary precautions to prevent a Venue from suffering damage in the course of the Works being carried out.

If loss or damage (except loss or damage which is a direct consequence of the negligence of DDA, without fault or omission on the part of the Contractor) occurs to anything while the Contractor is responsible for its care, the Contractor shall at the Contractor's own cost promptly make good the loss or damage unless otherwise directed by DDA.



If and where minimal damage is planned i.e. necessary, unavoidable or rational, the Contractor shall reinstate such planned damage in accordance with its reinstatement plan where the costs, reinstatement methods, timeframes, suppliers/ subcontractors, etc. are described.

All reinstatement shall be deemed to be included in the Scope of Works unless DDA has provided written approval that it will undertake a specific item of reinstatement.

### **17.13 DRAWINGS AND TECHNICAL SPECIFICATIONS**

The drawings and technical specifications included in this document describe the concept designs, indicative constraints of the Venues and the technical requirements of the Works. The following are brief descriptions of them:

- Venue layout plans: a series of multi-layered drawings that contain layout information relating to a Venue. These drawings will vary from Venue to Venue, but are intended to cover the entire site and show information such as relevant permanent infrastructure and all temporary facilities;
- Facility layouts: specific individual drawings of miscellaneous facilities, such as administration areas, sports fields, press centres, equipment rooms, etc.; and
- Technical specifications: specifications describing technical attributes of the goods to be provided.

The documents above are preliminary and may change based on further information from both the Contractor and others. The Engineer In-charge will issue updated drawings and technical specifications to the Contractor as necessary.

It is the responsibility of the Contractor to ensure that it is using the most current documents issued by DDA. The Contractor shall promptly bring to the attention of the Engineer In-charge any inconsistencies, errors or omissions in the documentation above.

### **17.14 SETOUT**

The Engineer In-charge will provide sufficient set out information for each temporary structure to be erected on the ground. It shall be the Contractor's responsibility to ensure it has identified the correct markings and orientation as proposed on the drawings. Any doubts or queries shall be directed to the Engineer In-charge. If, in the Contractor's opinion, the site selected is unsuitable for erection then the Contractor shall notify the Engineer In-charge before commencing erection of the temporary structure.

### **17.15 INVENTORY MANAGEMENT SYSTEM (IMS)**

The Engineer In-charge uses the Inventory Management System to manage all inventory, including the goods to be supplied by the Contractor. Generally, but not in all circumstances, the IMS is used to manage the fitout requirements of each facility (temporary structure for the purposes of this RFP) via the

production of detailed room data sheets. All item ordering by the Engineer In-charge will be executed using this system. On request (with reasonable notice), the Contractor can be provided with reports from the IMS.

Facility (temporary structures) drawings and site layout directions/ drawings shall be issued progressively with orders. The Contractor shall check these drawings against the corresponding order and bring any errors or anomalies to the attention of the Engineer In-charge.

#### **17.16 FACILITY IDENTIFICATION**

All facilities, including temporary structures, are expected to be allocated a unique reference code by DDA. All applicable correspondence issued to Contractors including clarification documentation, specifications and drawings pertaining to any particular facility at a Venue shall refer to the reference code to avoid misunderstanding or confusion.

It is the responsibility of the Contractor to check the correspondence against the corresponding order and shall bring any errors or anomalies to the attention of the Engineer In-charge.

#### **17.17 DESIGN STANDARDS**

##### **17.17.1 General**

The design of the framed structures, marquees, footings and exit signs shall be in accordance with all the relevant Indian Standards and the current National Building Code of India, including all future amendments, unless exemption or dispensation has been granted via a permit from concerned department / authority.

The Contractor will be required to provide all necessary approvals and occupancy permits as required from all appropriate authorities including the Fire Department, evidence of compliance with the current National Building Code of India and other relevant design standards and statutory requirements. In all cases the Contractor shall submit a copy of all relevant documentation evidencing the above approvals and permits to the Engineer In-charge at least four (4) weeks prior to site mobilisation.

The Contractor shall assist the Engineer In-charge and DDA in the formulation of the overall works schedule for relevant Venues.

During the Final Design Period, the Contractor shall work with the Engineer In-charge and other contractors such as DDA's, HVAC, electrical and hydraulic services contractors to ensure the power and water requirements of the Contractor's general lighting and cooling systems are properly serviced and coordinated.

##### **17.17.2 "For Installation" documentation**

From the date of appointment to site mobilisation, the Contractor shall at all times maintain close contact and liaison with the Engineer In-charge and respond to requests for details relating to the Works in a timely manner, including:

- “For Installation” drawings;
- shop drawings;
- setout drawings;
- detailed technical specifications, and;
- other such documents required for the fabrication (where applicable), installation and/ or the commissioning of the Works.

#### **17.17.3 Certification**

The Contractor shall obtain independent certification of all goods and designs offered in its Proposal if it is accepted.

At least seven (7) days prior to the erection of any structure, the Contractor shall submit to the Engineer In-charge design drawings and engineering certificates prepared by an independent engineer.

#### **17.18 MEETINGS / BRIEFINGS**

The Contractor shall attend all meetings as requested by DDA or the Engineer In-charge. Meeting venues and times shall be at the discretion of DDA.

Notice of meetings shall be given a minimum of 24 hours in advance by DDA. Such meetings convened by DDA or the Engineer In-charge for the purpose of discussing scheduling, site activities or industrial matters, including meetings convened on an urgent basis in relation to actual or potential industrial action or other urgent matters as determined by DDA or the Engineer In-charge.

#### **17.19 LIAISON WITH OTHERS**

In addition to liaison with the Engineer In-charge, the Contractor is also expected to liaise with other companies, organisations and personnel involved in the staging of the Games such as Organising Committee, DDA staff, other contractors, in particular DDA’s electrical and hydraulic services contractors, project managers, site managers, OHSE officers, Organising Committee sponsors, suppliers, etc.

The Engineer In-charge shall provide the Contractor with details of such companies, organisations and personnel progressively.

#### **17.20 TRAVEL AND ACCOMMODATION**

Unless otherwise agreed with DDA in writing, the Contractor shall be responsible for arranging and paying for all travel and accommodation required for all of its personnel or subcontractors who are involved in the provision of Works.

#### **17.21 PRESENTATION STANDARDS**

The Games is a prestigious world-class sporting event with significant international exposure. It is highly regarded as a benchmark for the ‘world’s best practice’ and as a result the quality of presentation of all facilities and infrastructure will be of the utmost importance.

As such, all goods, materials, equipment, design, infrastructure, etc. supplied by the Contractor shall be well presented and in excellent condition.

### **17.22 VENUE USE AGREEMENTS (VUA) AND CODES OF CONDUCT**

DDA will be entering into a VUA with the management of the Venue in the lead up to the Games. These VUAs shall outline the terms and conditions for the use of the venue for the Games and Contractors will be required to comply with them. VUAs will be made available to Respondents at the DDA website - [www.dda.org](http://www.dda.org) during the RFP period, as the agreements are formally executed. Any discrepancy or inconsistency between the Preliminaries contained within Section 2 of this document and a VUA shall be brought to the immediate attention of the Engineer In-charge.

The Contractor shall comply with the requirements of any code of conduct that may be issued and updated by DDA for any Venue, or any existing codes of conduct that may exist for any Venue, including any modifications.

### **17.23 NUISANCE**

The Contractor shall so organise and conduct the Works so as to minimise inconvenience to others, including but not limited to, residents near the site of the Works by the control of noise, vibration, dust, mud and any other nuisance.

The Contractor is expected to cooperate fully with DDA and the Contractor shall comply with all directions of the Engineer In-charge in this regard.

Particular care shall be taken to minimise inconvenience to the public and disruption to traffic. The Contractor will seek approval from the Engineer In-charge with regards to any traffic control and/ or road closures during the Works Period and shall provide the Engineer In-charge with a minimum notice of 48 hours, of any such activity.

It shall be the responsibility of the Contractor to seek the necessary approvals from all appropriate authorities to enable it to carry out the Works. The Contractor will be responsible to make all necessary arrangements and provide adequate warning signals, bollards, cones and flagmen in accordance with any applicable guidelines, codes of practice or standards.

Agreement shall be reached by the Contractor with the appropriate authorities and the Engineer In-charge with respect to roads which may be used for importing materials and removing spoil and/ or waste. Wheels of vehicles shall be cleaned as necessary to ensure against spoiling of local roads.

### **17.24 CLEANING UP**

The Contractor shall at all times keep its work areas, shared with other contractors or otherwise, in a clean and tidy condition, including the regular removal of rubbish/ refuse and surplus material. All DDA contractors are expected to comply with this requirement to ensure all Venues are well presented at all times.

The Contractor shall comply with all directions of the Engineer In-charge in this regard.

In particular, the Contractor shall ensure at the end of any working day, all excess materials are removed from the work site to ensure that they do not cause unnecessary damage to any grassed or other sensitive areas, or become an occupational health & safety or environmental hazard.

The Contractor is responsible for the removal from the Venue and disposal of all packing and other waste material associated with its works. No packaging materials are to be left at a Venue. The Contractor must arrange for all reusable packaging to be returned to its warehousing or distribution facility for later re-use, unless otherwise approved by the Engineer In-charge.

Failure to comply with instructions, including verbal directions, to clean up within 24 hours during or at the completion of works, will result in the cleaning being undertaken by others at the direction of the Engineer In-charge with all costs being charged to the Contractor.

If appropriate, DDA may consider providing common waste removal facilities for all Contractors from time to time at the Venue for and on behalf of the Contractors. The reasonable cost of these facilities (or portion thereof) would be charged to the Contractor.

The contractor will have to provide cleaning of the facilities/ structure until handover to the cleaning contractor from the Organising Committee Commonwealth Games Delhi 2010 or 15<sup>th</sup> Sept 2009 which ever is earlier.

#### **17.25 ACCREDITATION**

An accreditation system will be established by DDA to control access to each and every competition and non-competition Venue. The accreditation requirements are likely to vary between the Venue and phase of operation.

Accreditation will be required for both Contractor personnel and vehicles. The accreditation policies and procedures for the Venue will be determined by DDA (in consultation with security agencies) and may involve the Contractor and its personnel and/ or vehicles being subject to security checks.

It is likely that the accreditation requirements will vary between the Works Period and Games Time at a Venue.

It is the responsibility of all Contractors that require site access to comply with all DDA accreditation policies, rules, regulations and procedures.

Accreditation privileges will be determined by DDA and/ or the Engineer In-charge in consultation with the Contractor based on the operational needs for the Venue during the works period.

During the game time, venue accreditation will be determined by the Commonwealth Games Organizing Committee Delhi 2010, in consultation with the security agencies.

### **17.26 KEYS AND LOCKS**

The key and lock systems utilised for the Venue will vary. The Contractor shall make all necessary arrangements directly with the Engineer In-charge where it requires access to secure rooms or areas.

At least 24 hours written notice must be given prior to the issue of keys.

The Contractor shall fully inform itself of the procedures that apply at the Venue and ensure that all of its personnel are familiar with and adhere to the procedures.

It is the responsibility of all Contractors to comply with all DDA policies, rules, regulations and procedures and/ or directions provided by the Engineer In-charge in this regard.

The Contractor will be responsible for returning keys to the Engineer In-charge as directed. The replacement cost or consequential losses shall be borne by the Contractor for the loss or damage of the keys and/ or locks.

Only in exceptional circumstances will keys be provided to Contractors on a full time basis whilst carrying out its Works.

### **17.27 MEALS AND CATERING**

The Contractor shall be responsible for adhering to its employer obligations and terms and conditions of any employee agreement related to meal provisions.

At Games Time, catering for personnel working at the Venue will be provided by Organising Committee Commonwealth Games Delhi 2010. The terms and conditions shall be laid down by Organising Committee at appropriate time, which the contractor has to follow.

In the games period the Contractor will not be able to bring its own Caterers to the Venue without the express prior approval of Organising Committee.

The Contractor shall fully inform itself of the Catering procedures that apply at each site and ensure that all of its personnel are familiar with and adhere to the procedures.

It is the responsibility of all Contractors to comply with all Organising Committee policies, rules, regulations and procedures and/ or directions provided by the Engineer In-charge in this regard.

### **17.28 COMMUNICATIONS**

It shall be the responsibility of the Contractor to ensure that the nominated Contractor Representative(s) remain readily contactable by the Engineer In-charge at all times during the period of the works under the Works Agreement.

The Contractor Representative(s) shall be available twenty-four (24) hours per day, seven (7) days per week during the Works Period and Games Time. A

mobile telephone contact number, with message bank facility is to be provided to the Engineer In-charge for all Contractor Representative(s).

In addition, in a number of limited cases, the Engineer In-charge may provide at least one (1) radio for use by Contractor Representatives during the late stages of the Fitout Period for the Games. This would be provided for the sole purpose of communicating directly with the Engineer In-charge and other key Contractors and shall be carried at all times by a representative of the Contractor whilst at the Venue.

It shall be the responsibility of the Contractor to ensure that the radio is fully operational and that batteries are charged at frequent intervals at the Venue battery replacement location. The Contractor will be further responsible for the return of the equipment to the Engineer In-charge as directed. The replacement cost for the loss or damage of the equipment shall be borne by the Contractor.

## **17.29 QUALITY ASSURANCE**

The Contractor shall control and maintain effective control of the quality of the Works, provide test facilities and perform all examinations and tests necessary to demonstrate conformance of the Works to the requirements of the Works Agreement and shall offer for acceptance only Works that so conform.

The Contractor shall establish and maintain a system of records that provide objective evidence that the requirements of the Works Agreement have been satisfied, and that the Contractor's controls and inspections are effective.

The Contractor agrees to and shall facilitate the Engineer In-charge conducting audits to provide evidence of the use and effectiveness of the Contractor's quality system through the execution of the Works under the Contract. The Contractor shall rectify non-conformances found during audits undertaken by the Engineer In-charge or DDA.

No part of the quality system shall be used to preclude or otherwise negate the requirement of any part of the Works Agreement, or the obligations of the Contractor pursuant to the Works Agreement.

The Contractor is responsible for ensuring the Works meet all technical and quality requirements of the Works Agreement and shall keep continuous records of action taken and shall advise the Engineer In-charge in writing of significant alterations required to fabrication or manufacturing techniques to ensure that specified requirements are met.

The Contractor shall ensure that the quality assurance requirements of the Works Agreement are included in any subcontracts entered into by the Contractor.

The Contractor's quality system shall include the following elements:

- Quality manual;
- Quality plan;
- Quality procedures;
- Inspection and test plans;

- Internal audit schedule;
- Technical procedures and work instructions;
- Quality records; and
- Reference and other related documents.

These shall be submitted by the Contractor for review and comment by the Engineer In-charge within eight (8) weeks of appointment.

The Contractor shall also comply with any further quality assurance specification documents or requirements that are incorporated into the Works Agreement by the Engineer In-charge from time to time.

### **17.30 COMPLETION AND HANDOVER**

Completion of the Works by the Contractor must be achieved both in stages and in Venues. The key stages include:

- Completion at the end of the Fitout Period; and
- Completion at the end of the Reinstatement Period.

The key deliverables to be supplied to the Engineer In-charge at the completion of the Fitout Period include:

1. Certification of all goods provided by the Contractor that they are fit for purpose, commissioned and ready to be used/ occupied;
2. Operation manuals for the goods provided, including drawings/ diagrams where applicable;
3. Training of key staff related to the staging of the Games in the use of the goods provided;
4. Handing over of five (5) sets of keys and locks for lockable marquees provided; and
5. Names and contact details of all of the Contractor's staff involved in its maintenance plan for the goods provided.

The Engineer In-charge will conduct a pre-completion inspection of the goods provided with the Contractor, at times to be determined in the Works Schedule, for the Venue.

Defects identified at the pre-completion inspection shall be rectified by the Contractor in time for handovers, which are also to be determined in the Works Schedule.

### **17.31 WORK BY OTHERS**

Work by others associated with the marquees, floor coverings, temporary partitions, podiums, etc. includes:

- For general lighting (only) within marquees, the reticulation of power from a Venue's electrical distribution boards, whether existing or supplied by DDA's electrical services contractor, to the Contractor's electrical sub-boards designed for marquee lighting;



- The Supply of reticulation of power for International Zone, Transport Mall, Main Dining Hall, Operational Zone I & II from the Venue's electrical distribution board/substation, whether existing or supplied by DDA's electrical services contractor, to one point near the structure/power-consuming equipment within marquees, including FFE provided by the Contractor (where applicable);
- The reticulation of chilled water for International Zone, Transport Mall, Main Dining Hall, Operational Zone II from the Venue's AC Plant room whether existing or supplied by DDA's HVAC services contractor, to respective AHU's one point within temporary structure with AC needs, including FFE provided by contractor (where applicable) near the structures;
- The reticulation of data (technology, telephone, etc. ("comms")) services for equipments from a Venue's distribution frames, whether existing or supplied by DDA's electrical services contractor within temporary structures, to equipment within marquees with telecommunication, LAN/ VAN needs, including FFE provided by the Contractor (where applicable);
- The UPS system for equipments within temporary structures with UPS need, excluding FFE provided by the Contractor (where applicable);
- Video boards, Timing & scoring equipments, in venue TV systems, Audio visual equipments, CCTV, Access control systems within the structures;
- All loose furniture & office equipments like Fax, telephone, Computers, photocopiers, etc. including water dispensers, waste bins & consumables within the structures, unless otherwise specified;
- All Equipments for Kitchen inside the temporary structures especially main dining hall, casual dining hall, Bar/ restaurant unless otherwise specified;
- Exhaust system for cooking systems inside the structures, unless otherwise specified;
- 
- The reticulation of peripheral lines of domestic fresh cold water (domestic use), recycled water (flushing, irrigation & AC plants use), sewer Line, storm water, fire fighting (with yard hydrants) including underground water storage tanks & pump services from a Venue's water network by DDA's hydraulic services contractor to agreed valved connection points outside of marquees, for items within marquees with domestic cold water needs, including the Contractor's FFE (where applicable) and cooling systems (reticulation from said

connection points to a plant or a piece of FFE is the responsibility of the Contractor);

- The sound insulation for the broadcasting center inside the Media Center of the International Zone;
- Site development works such as road works, landscaping work including pathways, horticulture, landscape lighting, road lighting, fountains etc. But excluding the hard standing areas besides the temporary structures for loading-unloading/ container storage as specified in this document.
- Where applicable, the reticulation of sewer services from a Venue's sewer network by DDA's hydraulic services contractor to agreed discharge points outside of marquees, for items within marquees with sewer needs, including FFE provided by the Contractor (where applicable);
- Supply and fixing of Look-of-the-Games, sponsor equipments, flags & banners, Look-of-the-Games signage and elements; and
- Cleaning after handover to the cleaning Contractor to the OC till the OC moves out at the end of use period.

### **17.32 COMMERCIAL**

For the Commonwealth Games, all commercial facilities shall be either, removed, vacated or made available for Games use without encumbrance. Where this is not possible, this shall be identified and agreed with the Organising Committee prior to contracts being signed. In particular, this shall apply to ongoing operations, advertising and sponsorship to avoid conflict with Games time commitments.

DDA is committed to the Organizing Committee Delhi 2010 to hand over a clean venue. All branding/ advertisement rights are reserved with the Organizing Committee Delhi 2010.

### **17.33 WORKS SCHEDULE**

#### **17.33.1 EXCLUSIVE AND NON-EXCLUSIVE USE PERIODS**

DDA has negotiated exclusive access periods with relevant Normal Operations Mode (NOM) venue operators for the staging of the Games. DDA has designated a portion of this Exclusive Use Period, at the Venue, for the delivery, installation, commissioning, decommissioning, removal and reinstatement of all works required, including the Works under the Works Agreement, to facilitate the staging of the Games. DDA has further identified a portion of the Exclusive Use Period at the Venue for the Contractor to carry out the Works. These are listed in this Section below.

Opportunities for earlier access prior to the commencement of the Exclusive Use Period (in the Non-exclusive Use Period) may be available at certain Venues. The Non-exclusive Use Period for the Venue is defined by the dates listed under Columns A and B in this Section. Access during the Non-exclusive Use Period is dependent on the usage of those venues close to the Works Period.

Permissions from NOM venue operators are required before access during the Non-exclusive Use Period can be granted. The Contractor shall advise DDA early in the Final Design Period, where early access would be considered essential/ beneficial in achieving Key Milestones and in maintaining the Works Schedule. Early advice is necessary to enable DDA to canvass early access opportunities.

If early access is granted, the Contractor shall identify and make provisions for advance site facilities (e.g. security, power, water and amenities) to be installed at its own cost. DDA has typically not scheduled to provide these facilities (where they are planned; in part or in whole) outside of the Exclusive Use Period.

Additionally, if early access is granted the Contractor's unit rates offered in Table A of Returnable Schedule U shall remain unchanged.

### **17.33.2 CONTRACTOR ACCESS DATES**

The time windows at the Venue for the Contractor to carry out the Works are constrained by a number of factors, including the time necessary for the completion of planned preceding and succeeding works by others.

The Contractor shall assume the Works can only be carried out during the periods nominated in this Section in the preparation of its Proposal i.e. that framed by the access dates of Columns B and E for the Venue. The "Finish" dates are latest dates when relevant portions of the Works must be completed by.

Many of the items to be supplied by the Contractor will be required for the whole period of the Games from 3<sup>rd</sup> to 14<sup>th</sup> of October 2010. However, events in the venues may be complete prior to the completion of the Games. Subject to the Engineer In-charge's approval, supplied items may be able to be decommissioned and removed from this time.

The Contractor shall submit a detailed Works Schedule within the time stipulated in this document, to assist the Engineer In-charge in coordinating the overall works schedule involving other contractors and DDA staff. Final coordination of the Works is to be agreed with the Engineer In-charge at the end of the Final Design Period.

### **17.33.3 WORKING DAY AND HOURS**

A working day or hour shall be any day or hour where it is necessary for the Contractor to carry out and complete relevant portions of the Works within the timeframes stipulated in this Section.

This may require work to be carried out on an industry rostered-day-off, a public holiday, weekend or on other normally non-standard working day or hour. The Respondent shall consider and include such provisions in its Proposal.

#### 17.33.4 DEPENDENT WORK PACKAGES

**Type A, B, C & E** temporary structures have a significant number of activities to follow their installation and should be considered as a critical tasks. There is less of the Works to follow in other types.

Certain marquees like the “Main Dining Hall” also have critical works by others. In order the works to commence and meet their separate obligations to a Venue’s overall works schedule depends on their punctual completion. The contractor has to comply with the mutually agreed upon dates with the Department & the OC and coordinate with the other contractors in order to achieve timely completion.

#### 17.33.5 TRANSITIONAL WORKS

Transitional Works are expected to take place in the Residential Zone of the Games Village. At this stage, these works are expected to have little impact on the Works, involving primarily the repositioning of a limited number of floor coverings and/ or partitions. The amount of materials/ goods required in the new configuration is also unlikely to change significantly. The Engineer In-charge will confirm this at the conclusion of the Final Design Period.

#### 17.33.6 CONTRACTOR ACCESS DATES

**Note:**

- Refer to chapter 1.22 for meanings of capitalized terms.
- All days within the Works Period are considered as Working Days.

Location	Precinct / Venue Code	Works Period (for Contractor)				
		Fitout Period			Reinstatement Period	
		Start		Finish (C)	Start	
		Earliest (A)	Latest (B)		Earliest (D)	Finish (E)
Commonwealth Games Village	07002	21.01.2010	01.03.2010	20.05.2010	20.10.2010	24.12.2010
Siri Fort Sports Complex	(Deleted)					
Yamuna Sports Complex	(Deleted)					

#### 17.34 VENUE ADDRESSES AND CODES

The addresses provided herein are for the Respondents information only. Under no circumstances are Respondents to make direct contact with the Venues. In order to inspect a Venue bidder has to inform the engineer in charge, and only after getting his prior approval can the bidder visit the venue.

Code	Venue / Precinct Name	Sports(s) / Activity	Address
07002	Commonwealth Games Village	Residential, Training : Wrestling, Weightlifting, Aquatics, Athletics	Commonwealth Games Village, near Akshardham Temple Off NH-24, Delhi
	Siri Fort Sports Complex	(deleted)	
	Yamuna Sports Complex	(deleted)	

### 17.35 Phases of Work

Work consists of 3 Phases

Phase – I : Construction stage – period 120 days or 20<sup>th</sup> May 2010  
(which ever is earlier)

Phase – II Maintenance stage – from the date of completion of  
Phase – I to 20<sup>th</sup> Oct 2010

Phase – III : Removal stage – from 20<sup>th</sup> Oct 2010 to 24.12.2010

### 17.36 STANDBY MAINTENANCE STAFF

The Contractor shall provide standby labour to carry out any maintenance, rectification or modification works required during the Games. This should form part of the Contractor's agreed maintenance plan with the Engineer-in-charge.

The maintenance crew shall wear suitable uniforms, be well presented and be courteous. Some Temporary Structures are required to be closed up at night for security reasons (i.e. all walls installed and/ or locked) and opened in the mornings (i.e. some walls removed or tied back and/ or door(s) opened). The Engineer-in-charge shall provide details of facilities that require attention during the Games. The Contractor shall liaise with the occupier (Organizing Committee Commonwealth Games Delhi 2010 & Delhi Development Authority staff and/ or Games related personnel) as appropriate to arrange the timings of these openings and closures.

The Contractor shall carry out daily checks of all marquees to ensure that each installation remains intact, structurally sound and continues to be safe for occupation.

The Contractor shall ensure that each Ventilation/ cooling system is functioning properly by running daily checks of each installation, or on a more regular basis if instructed by the Engineer-in-charge.

Documentation of the daily checks shall be provided to the Engineer-in-charge by midday of each day. Any instance of interference with any structural component must be brought to the Engineer-in-charge's attention immediately upon its discovery.

## **18.0 TECHNICAL SPECIFICATION OF WORK**

### **18.1 Drawing List**

#### **Architectural Drawing**

Site Plan	CGV-C-NC-OPR-00-001
Operational Zone-I	CGV-C-NC-OVL-00-102
Operational Zone –II	CGV-C-NC-OVL-00-103
Transport Mall	CGV-C-NC-OVL-00-104
International Zone	CGV-C-NC-OVL-00-105
International Zone Bar Area	M9303-GA
Main Dining Hall	M9166-GA
Casual Dining, Ath. Serv.	M9298-GA
Polyclinic	CH/A-101 R1
Resident Centers	CGV-C-NC-OVL-00-110
Polyclinic Section	07002-S2-PC-AS-01
Residential Section	A-04
Stilt Level Plan	07002-S2-HG-02-R2

#### **Landscape Drawings**

Landscape Master Plan-I	07002-S4-MP-LSP-01
Landscape Master Plan-II	07002-S4-MP-LSP-02
Landscape Master Plan-III	07002-S4-MP-LSP-03
Landscape Master Plan-IV	07002-S4-MP-LSP-04

#### **Services Masterplan- Storm Water, Irrigation**

Services- S.W, Irrigation	07002-S6-MP-SE-02-A
Services- S.W, Irrigation	07002-S6-MP-SE-02-B
Services- S.W, Irrigation	07002-S6-MP-SE-02-C
Services- S.W, Irrigation	07002-S6-MP-SE-02-D

#### **Services Master Plan-Water-Supply, Sever, Electrical, Fire Fighting**

Services- Others	07002-S6-MP-SE-01-A
Services- Others	07002-S6-MP-SE-01-B
Services- Others	07002-S6-MP-SE-01-C
Services- Others	07002-S6-MP-SE-01-D

#### **Internal Electrical Dot Planning**

Security Systems-Gate A	2
Security Systems-Gate B	3
Security Systems-Gate C	4
Security Systems-Gate E	5
Security Systems-Gate F	6
Training First Floor	CGV-C-T-OVL-00-101
Training	CGV-C-T-OPR-00-101
Site Plan	07002-S6-MP-EL-MISC-001
Operational Zone-I	CGV-C-NC-OPR-00-102
Operational Zone –II	CGV-C-NC-OPR-00-103
Transport Mall	CGV-C-NC-OPR-00-106
International Zone	CGV-C-NC-OPR-00-104
Casual Dining, Ath. Serv.	CGV-C-NC-OVL-00-107
Polyclinic	CH/A-101 R1
Resident Centers	CGV-C-NC-OPR-00-110

**Note:** soft copy of drawings is available in the office of EE CGD-II.

## 18.2 TECHNICAL SPECIFICATION

### GENERAL

The Commonwealth Games is a prestigious world-class sporting event with significant international exposure. With this in mind, all items supplied by the Contractor shall be well presented and in good to excellent condition.

The Engineer-in-charge reserves the right to inspect any items and reject in part or whole any items that do not meet these standards of presentation or quality. All items that are rejected shall be replaced at the expense of the Contractor in accordance with the requirements of the Engineer-in-charge.

It is the Contractor's responsibility to ensure that all items supplied are fit for purpose. It is expected that the Temporary Structures also addressed to us Marquees are comprised of the following types:

**Type A.** Weatherproof, lockable structures module 15m curve span x 3m height, with cassette type raised floor, curtain wall with set of doors on front, solid panels with adequate doors on back & solid panels on side. These shall be complete with all the services like lighting, air-conditioning, power, fire alarm/ fighting (as required by fire department), plumbing/ hydraulic services, functional toilets & rain water discharge systems as per specifications. The structure shall have integrated cassette flooring with white color powder coated Aluminum curtain glazing & white color PVC hard wall paneling complete with integrated aluminum gutters & down pipes. The down pipes shall be concealed with matching white color capping. The structures shall be of best quality & shall be used for prime areas like International Zone & Transport & Transport Mall. In case of the International zone the central span of 10m will be used for habitable spaces complete with lighting, air conditioning where as the 2.5m on both the sides will be used as covered corridor for "Front of house" & "Back of House" access.

**Type B.** Weatherproof, lockable portal frame structures module 40m/ 30m/ 20m span x 4m height (at the valley) with cassette type raised floor, curtain wall with doors on front, solid panels with adequate doors & windows on back & side. The cassette flooring system in the kitchen are of dining hall shall be weight bearing type with minimum ground clearance of 300 mm. The structure shall be complete with all the services like lighting, air-conditioning, power, fire alarm/ fighting (as required by fire department), plumbing/ hydraulic services, functional toilets & rain water discharge systems as per specifications. The structures shall be of best quality & shall be used for Main Dining Hall, Kitchen & Transport Mall.

- Type C.** Weatherproof, lockable portal frame structures module 30m/20m span x 4m height (at the valley) with suitable raised floor, solid or soft wall panels with adequate doors and windows on walls. These shall be complete with all the services like lighting, air-conditioning, power, fire alarm/ fighting (as required by fire department), functional toilets & rain water discharge systems as per specifications. The structures shall be of good quality & shall be used for operational Zone-1 & 2.
- Type D.** Weatherproof, lockable, no raised flooring or air conditioning, Structures generally used for Bag & wand searches, Police check posts, VAHO etc. These shall have basic services like lighting, power, fire alarm/ fighting (as required by fire department), functional toilets & rain water discharge systems as per specifications.
- Type E.** Lockable internal modular partitioning work inside permanent structures complete with carpeting, false ceiling work as per specifications. The space shall be used for resident centers, CGA services Centers, polyclinic, casual dining & sports information center inside the residential zone. These shall be complete with all the services like lighting, air-conditioning, power, fire alarm/ fighting (as required by fire department), functional toilets as per specifications.
- Type F.** “Garden or marquee”; small structures, usually with no walls; generally 3 x 3m and commonly used for basic shelter or kiosks. These shall have basic services like lighting, power & rain water discharge systems as per specifications.
- Type G.** Miscellaneous overlays works as per specifications & Schedule inside the games village.

(Building wise detail specification chart is attached with this part of the document for quick reference)

**Mode of Measurement:** For computing the rates & for all billing purposes of structures Type A to F, only the plan area of the outer wall shall be measured. For Type G mode of measurement shall be as described in the bill of quantities.

### 18.3 TEMPORARY STRUCTURES

The Contractor shall supply a copy of the **Temporary Structures manufacturer’s approved installation specification**. All temporary structures and associated components shall be fit for purpose. They and the associated components such as base plates, hold-down pins and weights, bolts, cross-bracing and stiffeners shall be erected in accordance with the manufacturer’s specifications and shall comply with all relevant statutory requirements, including relevant Indian Standards, the National Building Code of India and other industry European standards & International standards.



“Temporary Structures (Marquees)” in this document means any of the following:

- ‘Temporary Structures (Marquees)’ refers to a structure with a robust, portal-type, gable-end frame or high peak type structures, ranging in sizes from 6m, 10m, 15m, 20m, 30m and greater, gable-end widths; with skins (walls) possessing beaded edges that are fixed to the frame via tracks in the structural members. Certain such structures can also accommodate hard walls, doors and integrated floors. They also vary in basic configuration such as curved roofs,, hexagonal, peaked roofs or portal frame (hangar type) structures.
- ‘Framed Temporary Structures (Framed Marquees)’ refers to a lighter version of a ‘Temporary Structure’ (defined above). They usually have a hipped roof made from round, sleeved members and are self-supporting. Skins are usually tied or hooked to the frame. They are not considered as ‘high’ quality and will mostly be used in back-of-house or low profile areas by Commonwealth Games Delhi 2010.
- ‘Garden temporary structures or garden marquees’ refers to 3 x 3m with peaked roof, collapsible or fold-up structures commonly used as simple shelters or market stalls at smaller events.
- Internal modular partitioning work inside other venues complete with carpeting, false ceiling work, lighting & air conditioning as per specifications. The space shall be used for resident centers, polyclinic, casual dining, religious centers & sports information center inside the residential zone.
- ‘Rope-and-Pole’ Temporary Structures (Marquees) do not usually use pegged or weighted base plates and are supported by tension using individual posts and guy ropes.

While Rope-and-Pole Temporary Structures are listed in the Price Schedules to provide DDA with the option of obtaining them, it is not anticipated they will be required for the Games.

### 18.3.1 TEMPORARY STRUCTURES SPECIFICATIONS

- The Structures shall be in accordance the following:  
BS EN 13782:2005 -Temporary Structures-Tents-Safety  
BS EN 1991-1-4:2005 -General Actions-Wind actions  
NA to BS EN 1991-1-4:2005  
BS 8118:Part 1 -Structural use of Aluminum
- The Structure should be made of Aluminum alloy 4.0mm thickness minimum Al Mg Si 1 F28 similar to 6061. T6. Except for the curve tent which is to be made of Aluminum alloy 6005 A (F 26) (Supporting test certificates have to be provided.).
- Structures should be of approved manufacturer. Purchase order, Bill, etc should be produced for approval.
- All aluminum alloys are to be anodized & all steel plates are to be hot dip galvanized.
- All aluminum profiles are to be made out of solid hard pressed 4 groove aluminum hollow profile. Steel parts hot-dipped galvanized according to DIN 50976 & extremely corrosion resistant.

- For each structure standard load calculations have to be provided.
- All temporary Structures shall be able to withstand weather condition from 6 to 40 deg. Celsius.
- The structure should be designed to take Wind load 0.50 KN/sqm, Wind speed 100 km/hr. (Supporting test certificates have to be provided.)
- All Temporary Structures shall be fire resistant in accordance with Local & International Standards. Contractor shall have to produce proper certification from Local Authorities for compliance before execution of work.
- The fabric material for all Temporary Structures shall be clean, in good condition and reasonably free of any markings, except from the safety marking from the country of issue.
- The fabric must have a double lacquering made out of highly concentrated PVDF.
- Environmental Impact Study: evidence of REACH conformity as per the European Norms for the proposed fabric material or its equivalent from the manufacturer of the fabric is to be given.
- All Temporary Structures roof panels shall be white in color, unless otherwise specified or approved by the Engineer-in-charge;
- 'Opaque' roofing may be provided in lieu of standard roofing with the express approval of the Engineer-in-charge. Where this occurs, general lighting may be required or augmented. The resultant additional cost shall be borne by the Contractor.
- Clear (Transparent and new) roofing may be provided in lieu of standard roofing with the express approval of the Engineer-in-charge. Where this occurs, extra air conditioning may be required or augmented. The resultant additional cost shall be borne by the Contractor.
- All Temporary Structures shall be weatherproof, waterproof, insulated, washable & tear resistant.
- The Contractor shall supply and install exit signs as required by relevant regulatory and building code requirements.
- In areas where required by the local fire department fire separation/ fire rated walls are to be provided. The Contractor is deemed to have allowed for this.
- On asphalt concrete, hardstand areas, and where underground services prevent the use of pegs, suitable concrete hold-down weights (counterweights) will be required to secure the marquees. In areas where high standards of presentation are expected suitable counterweights covers will also be required, until 10m under the floor counter weights can be provided. The Contractor is deemed to have allowed for this.
- The unit rates for Temporary Structures are deemed to include the provision of all foundation systems, necessary hardware systems, guttering, external walls/ skins, including split walls/ skins and any internal walling and/ or internal gables, flooring, floor covering, ramps/ steps, doors-windows, false ceiling, fire detection/ fire alarm (if required by relevant authority), fire fighting, power supply, lighting, air conditioning/ ventilation etc. as required.

### 18.3.2 GUTTERING

Guttering may be required between abutting marquees. Aluminum gutters shall be provided where guttering is required, the Contractor shall ensure that it is suitably installed with no leaks and that the area is appropriately drained. The gutters & the down pipes should be neatly concealed within the system. All the drainage systems have to be connected to nearest peripheral storm water drain with the help of suitable underground piping system.

### 18.3.3 DOORS/ WINDOWS

Temporary Structures will require doors. Doors can be any of the following:

- |                     |   |
|---------------------|---|
| Glazed doors:       | Aluminum frame glass door with no mid rail, can be single or double leaf. Mainly used in Front of house areas. As per architect's approval.   |
| Wooden flush doors: | Wood/ MDF/ Ply frame flush door with wooden laminate & option of glass panel, can be single or double leaf. As per architect's approval.  |
| Metal Doors:        | Aluminum frame Sandwich steel/ Aluminum panel door with option of clear vision panel. Can be single or double leaf. Will be mainly used in back of house or fire exits As per architect's approval. |
| Modular Doors:      | Aluminum frame single leaf melamine flush door with no mid rail. Will be mainly used in internal partitions, etc As per architect's approval.   |
| Warehouse Doors:    | Robust, sliding, mechanically operated, lockable warehouse doors with height 4-5m to be provided at gable ends of warehouse as per approval of the engineer in charge.                              |

In addition to the doors, windows will also be required to allow for natural light & ventilation. Wherever required they are to be Aluminum framed with glass panels/ louvers.

The colors are yet to be determined but standard colors are acceptable. The colors shall be worked out in consultation with the Organising Committee Commonwealth Games Delhi 2010.

All doors/ windows shall be supplied with all necessary hardware hardware like handles, locks, door closers/ floor springs (wherever required). They should be well presented, in good condition and close properly. To the extent that any external doors supplied are lockable and keyed, they must be master-keyed alike. Five (5) master keys shall be supplied for all doors to the Engineer-in-charge.

### **18.3.4 WALLS**

Walls shall be in as new condition, free of marks, fogging and excessive creases. They will be dominantly clear throughout the full panel without decorative treatments such as arches or beading. Walls shall be preferably insulated in air conditioned areas & shall be predominantly white in colour, unless otherwise specified. Back of house areas can have fabric walls with specifications as the fabric roof subject to approval by the architect.

The external hard walls are to be sandwich panels of Galvanized & coated Steel sheets according to EN 10-147 & P 34-301 Specifications. Insulation core is to be of Polystyrene (EPS) of thickness 30 to 140 mm. The system has to be minimum of M1 fire rated. The wall panels to have provision for fixing of doors/ windows.

If specified front wall is to be of curtain glazing with Powder coated Aluminum frame or SS spider fittings complete with glass doors.

In International Zone & Transport Mall the external wall is to be of white thermoform moulded PVC interlocking solid panels 4.0 mm thick. The wall panels should have minimum M1 fire rating in accordance to DIN 4012-BI. The external walling should be such that the vertical supports, gutter down pipes are to be covered with capping of white PVC. The finished system should have a uniform finish in proper line-level & in perfect symmetry. The front curtain glazing is to be of matching white color powder coated Aluminum frame. The wall panels to have provision for fixing of doors/ windows.

Internal partition walls to be Be self-supporting & should be able to take normal loads such as wall clock, display boards, LCD screens, etc. specified on site. Walls should be robust i.e. not susceptible to collapse owing to normal activities taking place in the spaces they are installed. Doors, where specified, to be lockable.

In case of areas like operational zone where warehouse areas are to be separated with airconditioned office spaces, intermediate gable walls of full height has to be provided. The contractor is deemed to have allowed for this.

In areas where required by the local fire department fire separation/ fire rated walls are to be provided. The Contractor is deemed to have allowed for this. Fire rating certificates are to be submitted before approval.

Wherever specified internal walls to have cladded wood or clip on honeycomb panels with fabric lining in standard shades & decorative light fixtures as per approval of the architect.

### **18.3.5 FLOORING, RAMPS AND FLOOR COVERINGS**

#### **18.3.5.1 FLOORING**

The raised flooring can be installed in loose soil, grass or undulated surface etc as the case may be. The final height of the platform will be decided by the tenderer after surveying the site. In general the platform should be prefabricated in Aluminium for support with adjustable

jacks. The platform should be erected in level with no rattling or creaking sounds while in use. In case of support jacks the tenderer may see the soil condition and accordingly provide base for the jacks to avoid sinkage in case of rains/ loose soil.

Solid flooring shall be supported off the ground and level. It shall be firmly fixed to bearers to eliminate any movement of the flooring. Floor joints shall be supported by bearers to eliminate movement and provide a flush joint and an uninterrupted floor surface. Flooring shall extend fully to the temporary structure or structure walling unless otherwise specified. The floor shall be stable, rigid & sturdy. It should not show any sign of buckling with live/ dead load & should not shake in use. Grass shall not be able to grow between temporary structures walls and the floor. In some facilities the flooring may need to be cut in order to gain access to a water point, a sullage connection or to fit specified floor sizes. In areas where the floor is expected to bear a load or experience significant traffic the use of heavy duty floors may be required.

The load bearing capacity for the office areas should be 250 Kg/sqm and that of services areas should be of 450 Kg/sqm.

The provision should be made for removing individual panels of MDF for installation of plumbing or any such application. The platform should be provided with handicapped access with the help of ramp of 1/12 gradient.

Standard **cassette type flooring** is to be used. Following are the specifications of cassette system;

The floor is to be made up of 3 principal components; Ring beam(outer frame), Beam (girders with supporters) & Decking (plywood units stiffened with Aluminum frame). The profiles for 'Ring Beam" and cassette stiffeners are to be of grade 6061 T6 extruded Al for the ring beam, 24 daN/mm<sup>2</sup> yield point and grade 6106-R2, 27 daN/mm<sup>2</sup> yield point for the cassette stiffeners. The steel beams are to be produced from steel moulds obtained by forming narrow E 36 steel strips. The different components are to be sized to resist excess loads of 500 daN/m<sup>2</sup> (5kPa). Standard cassette element to be of 2m x 1m. The Decking to be of varnished CTBX Plywood finished with protection film & non-slip coating. The system should have a safety standard for reaction to fire of M3(French standards) equivalent to Bfl-S1 (European standards). The surface after preparation should give aesthetic, completely plane surface for perfect finishing. The system should have peripheral cove to ease the fitting of doors and boarding along with provision of trap doors (1/50m<sup>2</sup>) for access to services below as per requirement.

### 18.3.5.2 Ramps

Where required (generally with a maximum change in level of 300 mm), ramps shall be provided in temporary structures with floor installation to accommodate wheelchair access. They shall be robust and able to handle high traffic volumes and be configured to meet all disability access building codes. In cases where very heavy load is anticipated like in warehouse, ramps to be constructed which take that load.

### Floor coverings

Floor coverings shall be clean, in good condition and firmly fixed. There shall be no wrinkles or creases in the surface and overlaps shall be avoided where possible or located in discreet or low traffic areas. Floor coverings shall extend to the Temporary Structure or room wall unless otherwise specified. The colors are yet to be determined but standard colors are acceptable. The Contractor shall allow for the maintenance of flooring in areas where a large amount of bump-in traffic causes the movement of floor coverings.

Where floor coverings are required in existing buildings and rooms, due care will be taken to ensure the method of fixing prevents any damage to the floor surface, especially in areas where carpet is applied to sporting surfaces.

The floor coverings will be of following types:

**Type 1: Synthetic needle Punch Carpet:** Synthetic needle Punch carpet of thickness 5 to 9 mm made of 100% polypropylene with jute backing. The floor covering should be of minimum width of 3 metre and should conform to fire grade of B1. The Carpet should be installed and covered with a provision of PVC film to be applied after lying and to be removed post production as approved by the Architect. The carpet should be firmly fixed with double sided tape without any creases and undulation etc. Floor Carpet shall be of a neutral colour, suitable for overlaying to existing floor surfaces eg. concrete. The carpet to be properly secured with the help of double sided tape, Aluminum angles (on floor) if needed or threshold bar (on ground)

**Type 2: Carpet Tiles:** Carpet tiles of size 500 mm X 500mm of thickness between 5 to 9 mm and a backing of PVC reinforced glass fibre, fire resistant of Grade Cat 1 to be laid on the structural floor as a finished surface available in various colours and textures. The contractor has to keep 5% extra tiles in stock at site for replacement in case of any staining or damage.

**Type 3: Vinyl Tiles:** The vinyl tile should be polyurethane Reinforced (PUR) laminated anti skid flooring tile of size 305 mm X 305 mm or 610 mm X 610 mm, or 900mm X 900 mm and thickness of 2 mm with slip resistance of Class DS R10, fire resistant of Grade 1 to be laid on the structural floor as a finished surface available in various colours and textures. Vinyl floor coverings shall be of a neutral colour, suitable

for overlaying to existing floor surfaces eg. concrete or carpet. Vinyl shall be fixed using tape/ adhesive on all edges to achieve a safe finish for the duration of the Games.

**Type 4: Pergo Tiles:** Wooden laminated flooring of size 1290 mm x 194 mm x 8 mm with fire resistance of grade B1 to be laid on the structural floor as a finished surface available in wooden textures.

The colors of the floor coverings shall be worked out in consultation with the Organising Committee Commonwealth Games Delhi 2010, but standard colors will be accepted.

### 18.3.6 TEMPORARY PARTITIONS

The technical requirements are listed below:

- Partitions shall have following heights as specified in Bill :
  - Full height 3.0 - 2.5m- For partitions in basement or marquees dividing two spaces/ office cabins, etc. or A/C & Non A/C areas.
  - Half height 1.5m- For internal partitions between office spaces.
  - Free Standing- For vertical display, etc;
- Should be self-supporting;
- Should be able to take normal loads such as wall clock, display boards, LCD screens, etc. specified on site;
- Should be robust i.e. not susceptible to collapse owing to normal activities taking place in the spaces they are installed;
- Should be insulated when used in air conditioned environment;
- Should have some acoustic qualities – STC rating of 35 or better wherever requested by the engineer in charge; and
- Doors, where specified, to be lockable.

In general there are three types of partitioning systems:

#### **Type 1: Panels & Partition for Athlete area:**

Custom Look -Using Honeycomb clipping system, Gilnhammer, G 40 or better. The system shall consist of 40 mm lightweight walls & aluminum connection fittings. The walls shall be of sandwich construction with robust MDF framework, a central layer made from non-polluting paper honeycomb and HDF with laminated plastic coating or fabric covering. The walls shall have two holes pre-drilled in each upper and lower corner one for the adjustable foot and one for the connector. Off-centre mounted bolts shall be fixed onto aluminum connection fittings. Off-center mounted connector shall be such that for adjustment it shall only be needed to lift 5.5mm. The pre-drilled hole & special connector shall lock the parts tightly together. With a tongue fastened tightly to the walls the parts connect so that they are flush with the surface. **The assembled walls shall have a perfect, flush surface with no visible connections to spoil the sleek effect.** In the system single stand elements such as walls, towers, glazed panels, curved panels, skirting, flush doors, door frames or door surround panels, etc. shall all be interlinked by means of aluminum connection fittings giving a smooth, uniform, visually joint free surface. The system shall be able to accommodate cable raceways

from bottom to top using easily openable built in cable channels. Feature walls shall have inbuilt lighting system so as to enhance the quality of interior space. The fabric colour & quality (like Khadi, cotton or silk) shall be chosen by the architect incharge. The honeycomb panels will be 40mm thick conforming to Fire resistant & Sound absorption Grade of ( DIN 4102-B) or similar BIS standards.

**Type 2: Panels & Partition for office areas:**

Partitions are to be made of 40mm X 40mm aluminium, Frame sections, **with no vertical profile for 4 metre span**. Infill panels shall be of MDF, laminated boards connected by tongue and groove technique fitted on to the Aluminium frame work forming a neat continuous surface conforming to Fire resistant Grade of International/ similar BIS standards. In the system single stand elements such as walls, towers, glazed panels, curved panels, skirting, flush doors, door frames or door surround panels, etc. shall all be interlinked by means of aluminum connection fittings giving a smooth, uniform, visually joint free surface. Provision of cable raceways should be there in the system.

**Type 3: Panels & Partition for store areas:**

Partition made of Pre Fabricated System such as Octanorm, Meroform or similar with 40 mm uprights / 50 mm horizontal member with rigid certified locking system forming continuous panels. The infill panels should be pre laminated MDF/ HDF boards with surface laminated or melamine coated conforming to Fire resistant & Sound absorption Level Grade of International/ similar BIS standards. The tenders may show or display system along with doors, windows and other accessories like the locking system etc.

In areas where required by the local fire department fire separation/ fire rated walls are to be provided. The Contractor is deemed to have allowed for this.

In Polyclinic there is a provision of X-Ray & Ultrasound facilities. The rooms are to be lined "Lead" or Conc. to check for radiation. The Contractor is deemed to have allowed for this.

The colors are yet to be determined but standard colors are acceptable. The colors shall be worked out in consultation with the Organising Committee Commonwealth Games Delhi 2010.

**18.3.7 HARD STANDING/ PAVED AREAS ( GROUND PROTECTION)**

The facilities or areas where it is expected to be subjected to heavy loads beyond the bearing capacity of normal soil there ground protection are to be installed such that they take the additional load. For example spaces like loading/ unloading area, container yard, back of house services compound etc. Systems like precast concrete blocks (solid or hollow) or similar can be used in such areas depending on the loading condition & contractors innovative solution based on previous experience. Provided they meet all relevant statutory requirements such as relevant Indian Standards, the National Building Code of India and relevant industry standards.



The ground protection can be done on loose soil, grass or undulated surface etc as the case may be. The finished surface should be level, uniform & adequately drained in order to avoid any ponding in case of rains. The tenderer may see the soil condition and accordingly provide solution to avoid sinkage in case of rains/ loose soil/ heavy loads.

### 18.3.8 FURNITURE, FITTINGS & EQUIPMENT (FFE)

----- Deleted -----

### 18.3.9 TOILETS

All Temporary Structures shall have built-in toilets in adequate numbers as per the National Building Code of India or relevant international codes. The toilets are to be in brand new condition complete with all electrical, plumbing, civil fittings, fixtures and accessories. Each toilet block should have minimum of following components unless otherwise specified.

**Female Toilet:** 4 Nos. Wash Basin along with looking mirror, 6 Nos. EWC along with flushing system and toilet roll dispenser, 7 Nos. Waste Bins, 1 No. Hand Drier, 3 No. Soap Dispensers, 1 No. automatic air freshner, 1 No. paper napkin dispenser. Complete with lockable doors, washable floor covering, solid partitions, lighting, ventilation, water supply, waste disposal and all electrical and plumbing works.

**Male Toilet:** 4 Nos. Wash Basin along with looking mirror, 3 Nos. EWC along with flushing system and toilet roll dispenser, 6 No.s urinals with solid partitions along with flushing system, 4 Nos. Waste Bins, 1 No. Hand Drier, 3 No. Soap Dispensers, 1 No. automatic air freshner 1 No. paper napkin dispenser. Complete with lockable doors, washable floor covering, solid partitions, lighting, ventilation, water supply, waste disposal and all electrical and plumbing works.

**Disable ( Para Sports) Unisex Toilet:** 1 No. Wash Basin along with looking mirror, 1 Nos. EWC along with flushing system and toilet roll dispenser, 1 No. Waste Bins, 1 No. Hand Drier, 1 No. Soap Dispenser, 1 No. automatic air freshnerfreshener 1 No. paper napkin dispenser. Complete with grab rails, lockable doors, washable floor covering, solid partitions, lighting, ventilation, water supply, waste disposal and all electrical and plumbing works. The design should meet all relevant statutory requirements such as relevant Indian Standards, the National Building Code of India and relevant industry standards for barrier free movement.

Toilets can be built in-situ in brick work finished with tiles or suitable containers as per approval by the Architect based on the actual Mock-Up sample. The water supply shall be taken from the nearest main by the contractor and where possible drainage / sewerage discharge are to be connected to nearest main by the contractor. In cases where direct connection to main for sewerage discharge is not possible, contractor has to arrange disposal with the means of pumping / self contained toilet containers, the contractor's price in schedule shall be inclusive of all such provisions. Toilets are to be finished in a non-slip, easily maintained finish, such as tiles / vinyl to a colourcolor yet to be determined, but standard colourscolors are acceptable. The toilets shall include steps and ramps to meet all relevant statutory

requirements such as relevant Indian Codes & Standards , the National Building Code of India and relevant industry standards.

The following are the minimum specifications of the fittings/ fixtures/ accessories the contractor can provide a equivalent or better solution;

Sanitary fixtures: 1<sup>st</sup> quality white glazed vitreous china of make duravet, American standard, hindware or equivalent or better.

Plumbing fittings: CP brass of make Grohe, Kohler, Jaquar or equivalent or better.

Tiles: 1<sup>st</sup> quality Ceramic tiles of make Kajaria, NITCO or equivalent or better.

Partition system: 12 mm th. Solid laminate restroom partition system by Merino or equivalent or better. Complete with accessories like doors, knobs, lock, hinges, coat hook, vertical stands, clamps, etc.

#### **18.3.10 Air Conditioning Ducts**

All major Structures over 400 sq.m area, with provision for Air Conditioning and without false ceiling shall have inflatable fabric ducts installed inside. The equipment and duct work system shall be designed by the contractor to provide uniform and effective air distribution system throughout marquee. Inflatable duct work with holes approximately 90mm in diameter and at 4 and 8 o'clock position are preferred. Duct works shall be installed, complete with support centenary wires, attaching and supporting brackets etc. and neatly aligned with the structure. The duct work shall be of white color Glass fabric with PU coating. with overall thickness of 0.37mm & overall weight per unit area of 470 gm/m<sup>2</sup> +/- 5 gm/m<sup>2</sup>. The fabric duct shall be of "CLASS 1" in accordance with the class definitions given in BS 476: Part 7: 1997. And shall be in accordance with the class definitions given in BS 476: Part 6: 1989.

All areas with provision for Air Conditioning and with false ceiling like resident centres, polyclinic, casual dining etc. coming inside the residential area permanent structures shall be appropriately ducted above false ceiling installed. The equipment and duct work system shall be designed by the contractor to provide uniform and effective air distribution system throughout area. Duct works shall be installed, complete with supply and return air grills, neatly aligned with the false ceiling.

The outdoor unit shall be mounted along marquee walls and connected to duct work installed within them, The contractor shall prepare a detailed design for this installation including the size and location of duct. It shall be possible to dis-connect some of the ducts to allow to installation of general lighting system and goods by others (if required).

#### **18.3.11 FALSE CEILING**

All areas with provision for Air Conditioning coming inside the residential area permanent structures shall have false ceiling installed. They include spaces like resident centres, polyclinic, casual dining, sports information centre etc. False ceiling shall be installed, complete with roof supporting accessories and

should have provision for fixing of lighting, air conditioning, fire detection, P.A System etc.

The false ceiling shall be of two types:

**Type 1: Roof lining:** Roof lining shall be of Cotton fabric stretched on to aluminium frame and permanently flame retardant of grade B1 without the use of additional finishes, & crease resistant with width 1400 mm and length of 50 running metres conforming to fire resistant standards (A.B. D. 0031) International/ similar BIS standards. Color to be determined at a later stage but standard colors shall be acceptable.

**Type 2: False Ceiling:** Mineral fiber false ceiling should be of prefabricated grid of size 600mm X 600 mm with aluminium framework suspended from the roof or the walls along with height adjusters hereof. The Aluminum “T” frame should be concealed with a groove in the panels. Clamps are to be provided for concealed wiring and luminaries’ etc. Infill should be of high density white mineral fibre board with fine fissures and approx. density of 375 kg per cubic meter (+/- 10%). Approved makes- USG, India Gypsum, Diakin, etc. other equivalent international make.

#### **18.3.12 PARTITION IN TRAINING HALL/ TRAINING HALL**

The Training Hall inside the Training Venue shall have two main events Wrestling and Weight Lifting. The hall has to be divided from the centre with light weight sound barrier curtain suspended from the structural truss.

The curtain can be leatherette made of double sided, PVC-Covered textile, flexible with high tensile strength in warp + weft, E easy-care, wash-off, non-aging, insensitive to balls and pushes. Complete with all accessories. Length connected by double seam and weight 120 g/m<sup>2</sup>. The leatherette is **flame-retardant** according to DIN 4102 B1. The sound-absorbing is according to DIN 18032, Part 4.

Or alternatively contractor can submit his own proposal with a sound reduction of min 20 DB (or as per approval of engineer in-charge) supported by relevant test certificates, etc

#### **18.3.13 POLICE WATCH TOWER**

The outside perimeter shall have provision for Temporary Police Watch Towers. These shall be installed on boundary wall structure or shall be independent structure at a height of 4.5m from ground with size of 1.8m x 2.1m x 2.1m. These shall be weather proof, open from side with solid panel (steel/ sandwich steel) upto height of 0.9m, so as to allow security person to have 360<sup>0</sup> of clear view. The Watch Tower shall have provision of ladder for access from the village side.

#### **18.3.14 SECURITY FENCE**

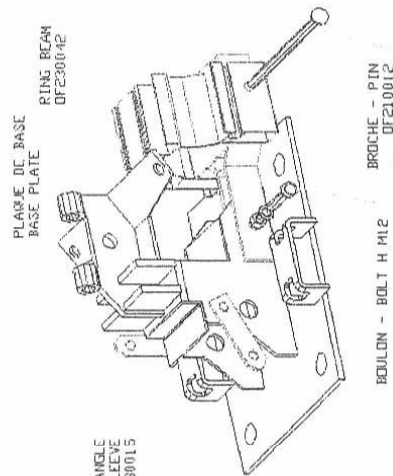
Where specified Security Fence of height 2.0m with tubular frame and wire mesh has to be provided as per approval of the Engineer-in-Charge. The fence shall be inclusive of Security Clamp, Anti-Lift Device, Struts, all hardware and support / foundation systems fit for purpose.

**18.13.14a Standards / Makes**

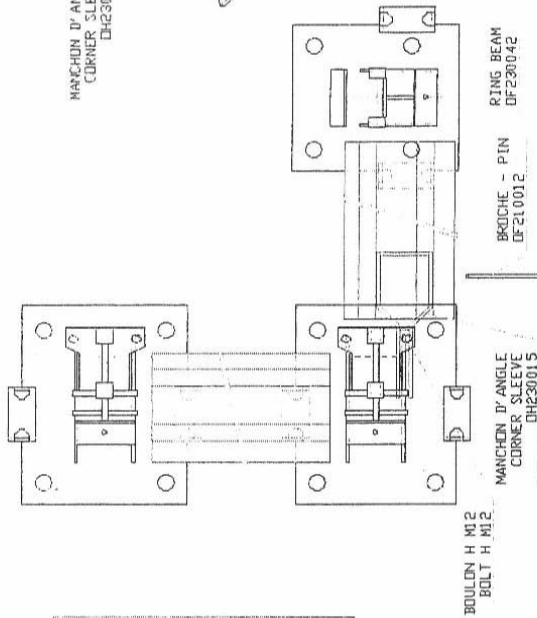
The following are the Makes / Model of the fittings and fixture to be used:

S.No.	Description	Standards/ Makes
1.	Tensile fabric	Mehlar, Ferrari, versidac
2.	Internal Partitioning	Gilnhammer, Octanorm (only for store), meroform, G40 or equivalent or better
3.	Structure	Rohder hocker, De Boer, Loesberger, Spacio Tempo, Malaysian Tents.
4.	Cassette Flooring	Same as structural make or Walter floor, K7 or equivalent or better
5.	Wall paneling	Same as structural make or Isometal, Lloyds, Ispat, Tata BlueScope or equivalent or better
6.	Inflatable/ Flexible Fabric ducting	Aero textile concepts or equivalent or better
7.	CP Brass Plumbing fittings	Grohe, Kohler, Jaquar or equivalent or better
8.	Sanitary fixtures	Duravet, American standard, hindware or equivalent or better
9.	Washroom cubicals	Merino or equivalent or better
10.	Ceramic/ vitrified Tiles	Kajaria, Nitco or equivalent or better
11.	False ceiling tiles	USG, India Gypsum, Diakin or equivalent or better

# CASSETTE FLOOR



POSE DES PLAQUES DE BASE  
ET DU RING BEAM  
LAYOUT OF BASE PLATES  
AND RING BEAM



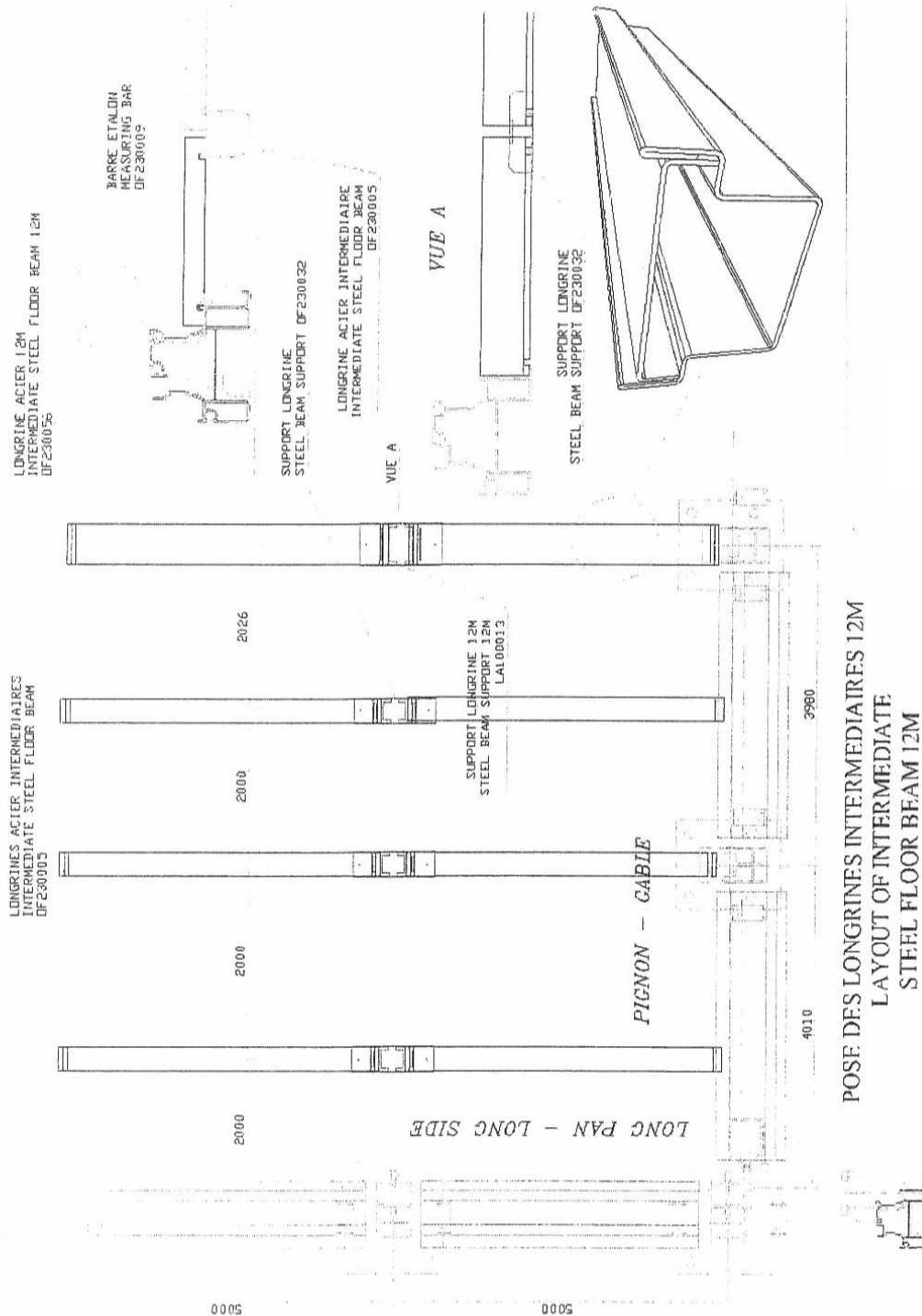
LONG PAN - LONG SIDE

PIGNON - GABLE

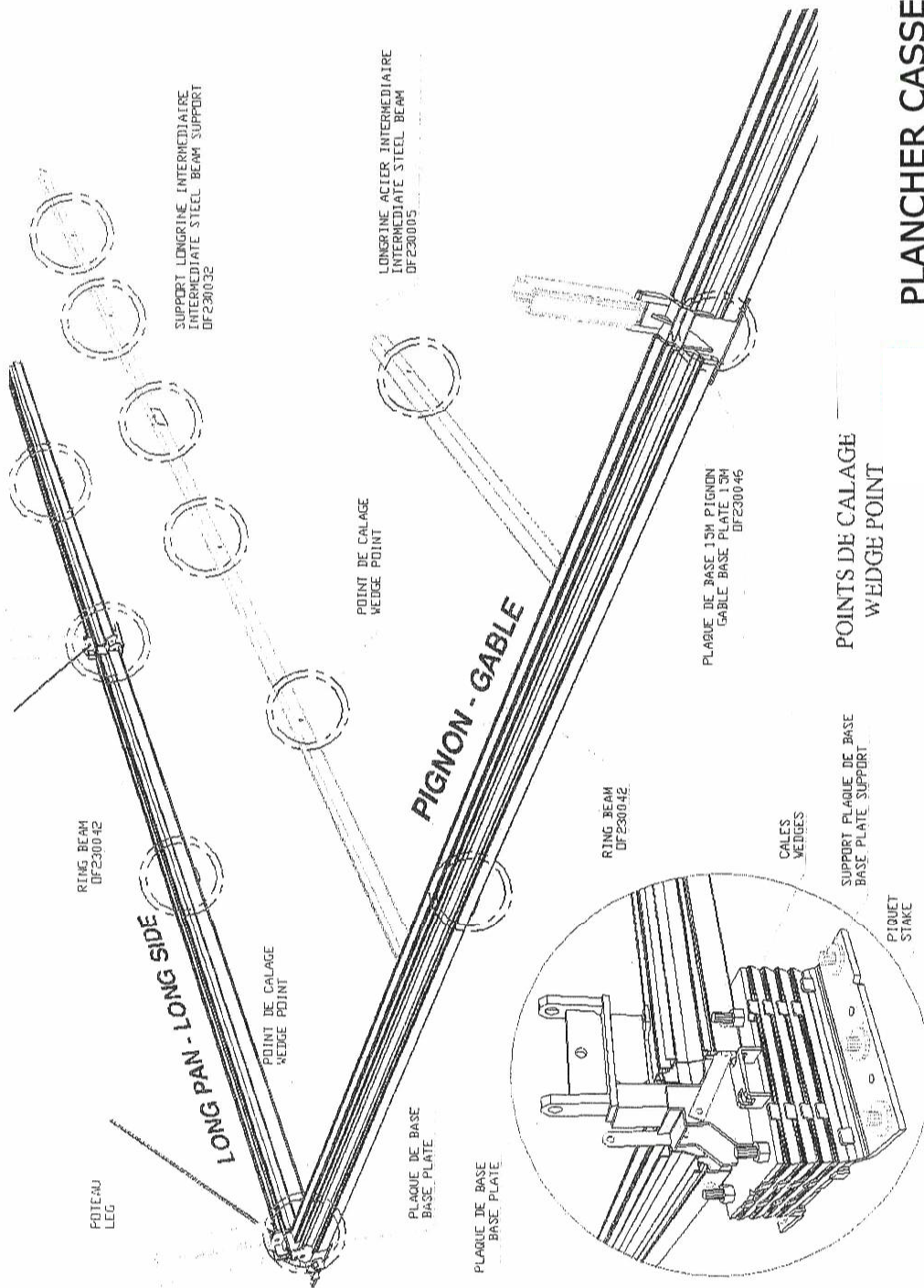
Ext. Int.

PLANCHER CASSETTE

# CASSETTE FLOOR



# CASSETTE FLOOR





## CASSETTE FLOOR

### TENSION RIDEAUX WALLS TENSION

POTEAU  
LEG

CROCHET TENDEUR  
STRETCHER HOOK

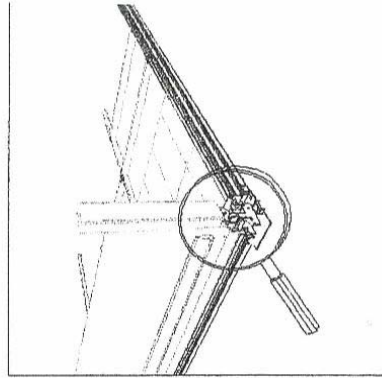
BARRE DE TENSION  
TENSION BAR

COULISSE  
SLIDE

LES ATTACHES PIVOTANTES DOIVENT ETRE MONTÉES  
CÔTÉ EXTERIEUR POUR LES STRUCTURES 15, 20, 25m  
ET CÔTÉ INTERIEUR POUR LES STRUCTURES 30 ET 40 m

THE REVOLVING FASTENERS HAVE TO BE ASSEMBLED  
ON THE EXTERNAL SIDE FOR 15, 20, 25m STRUCTURES  
AND ON THE INTERIOR SIDE FOR THE 30 AND 40 m STRUCTURES

RING BEAM  
DF 2300 42



MANCHON D'ANGLE  
CORNER SLEEVE  
DHE20015

PLAQUE DE BASE  
BASE PLATE

PIQUETS  
STAKES

ATTACHES PIVOTANTES  
REVOLVING FASTENERS

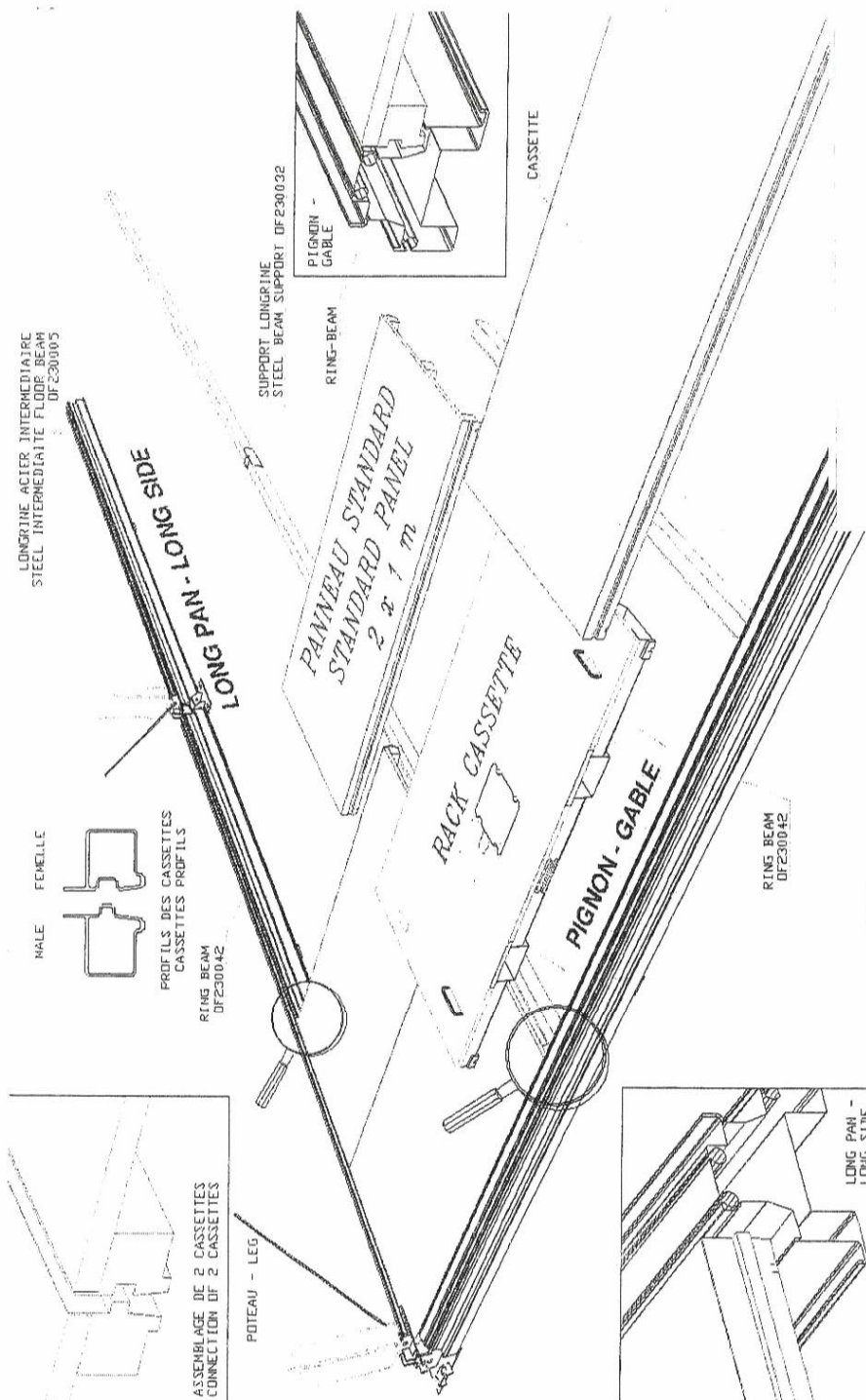
EXTERIEUR STRUCTURE  
OUTSIDE OF STRUCTURE

RING BEAM

### PLANCHER CASSETTE

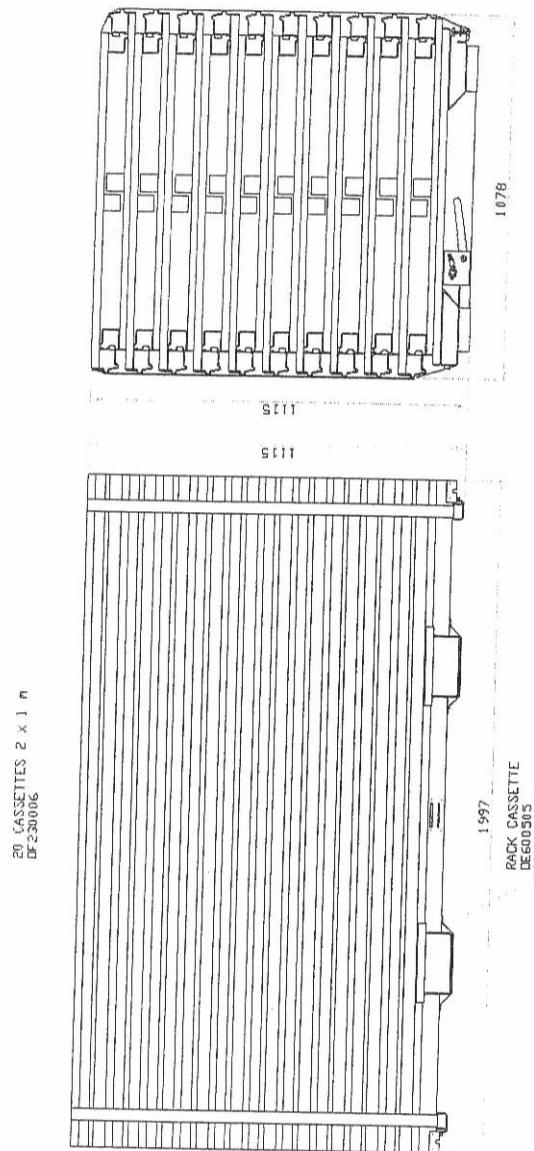


# CASSETTE FLOOR



PLANCHER CASSETTE

## CASSETTE FLOOR



POIDS D'UNE CASSETTE - WEIGHT OF A CASSETTE : 36 Kg  
 POIDS D'UN RACK CASSETTE - WEIGHT OF A CASSETTE RACK : 71 Kg  
 POIDS TOTAL - TOTAL WEIGHT :  $(36 \times 20) + 71 = 791$  Kg

PLANCHER CASSETTE

## CASSETTE FLOOR

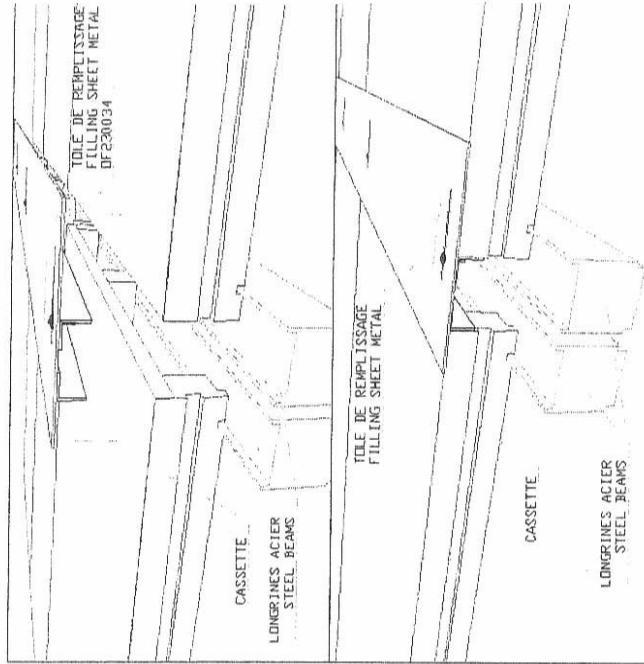
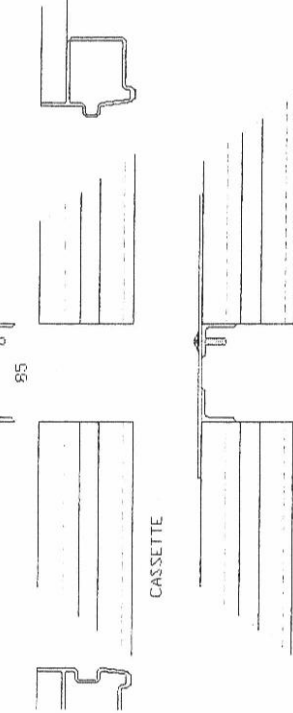
TOLE DE REMPLISSAGE EN LARGEUR  
FILLING SHEET METAL WIDTHWISE

TOLE DE REMPLISSAGE AVEC CORNIERE MOBILE  
FILLING SHEET METAL WITH MOBILE CORNER  
DF 230022

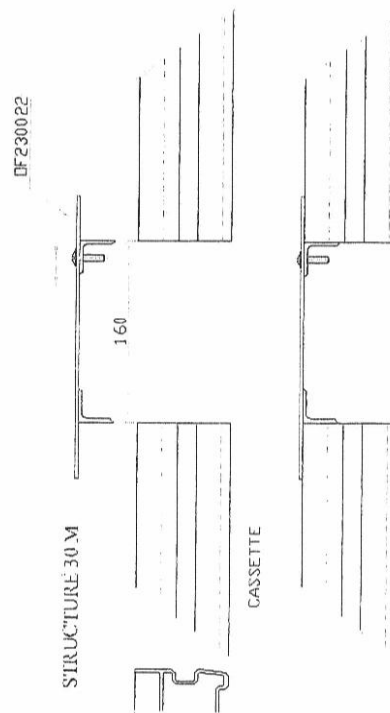
MEME PRINCIPE AVEC LA 400  
MAIS AVEC UN ESPACE DE 400

SAME ASSEMBLING METHOD FOR THE 400 m  
STRUCTURE BUT WITH A SPACE OF 400

STRUCTURE 20 M



STRUCTURE 30 M



PLANCHER CASSETTE

## CASSETTE FLOOR

### 2.3.2.2 Cassette floor:

The following documents present the main features of cassette floor, the calculations' note and the Instruction manual.

The calculations' note shows the technical features of the product, presents the tests and the building materials compared to the standards in use.

This document is presented to safety commissions to confirm the viability of the product and its erection.

Attached documents:

- Product sheet Cassette floor
- Design calculations note
- Instruction manual.

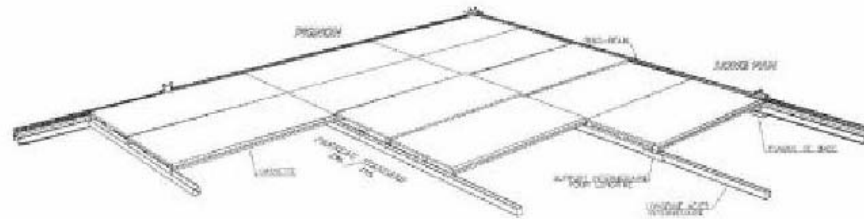
### Technical features

- Aesthetic, offers a completely plane surface for a perfect finishing
- Standard cassette (element) : 2 m x 1 m
- Specific elements adapted to each type of tent or structure
- Varnished CTBX plywood finishing with protection film and non-slip coating
- Strength : 1500 kg/m<sup>2</sup>
- Safety standards : CTS class / Reaction to fire M3 (French standards), equivalent to Bfl-S1 (European standards) and
- Minimum height on floor : 20 cm
- Can be erected on any type of ground (requires fastening)
- Peripheral cove to ease the fitting of doors and boarding
- Adjustment adapted to the type of ground
- Setting up of trap doors on request, for the flows under the floor (1/50 m<sup>2</sup>)
- Option: Covering with carpet or any other type of covering.

SSS

## CASSETTE FLOOR

### Technical drawings



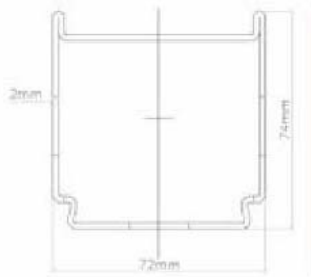
### General description

This floor is made up of 3 principal components:

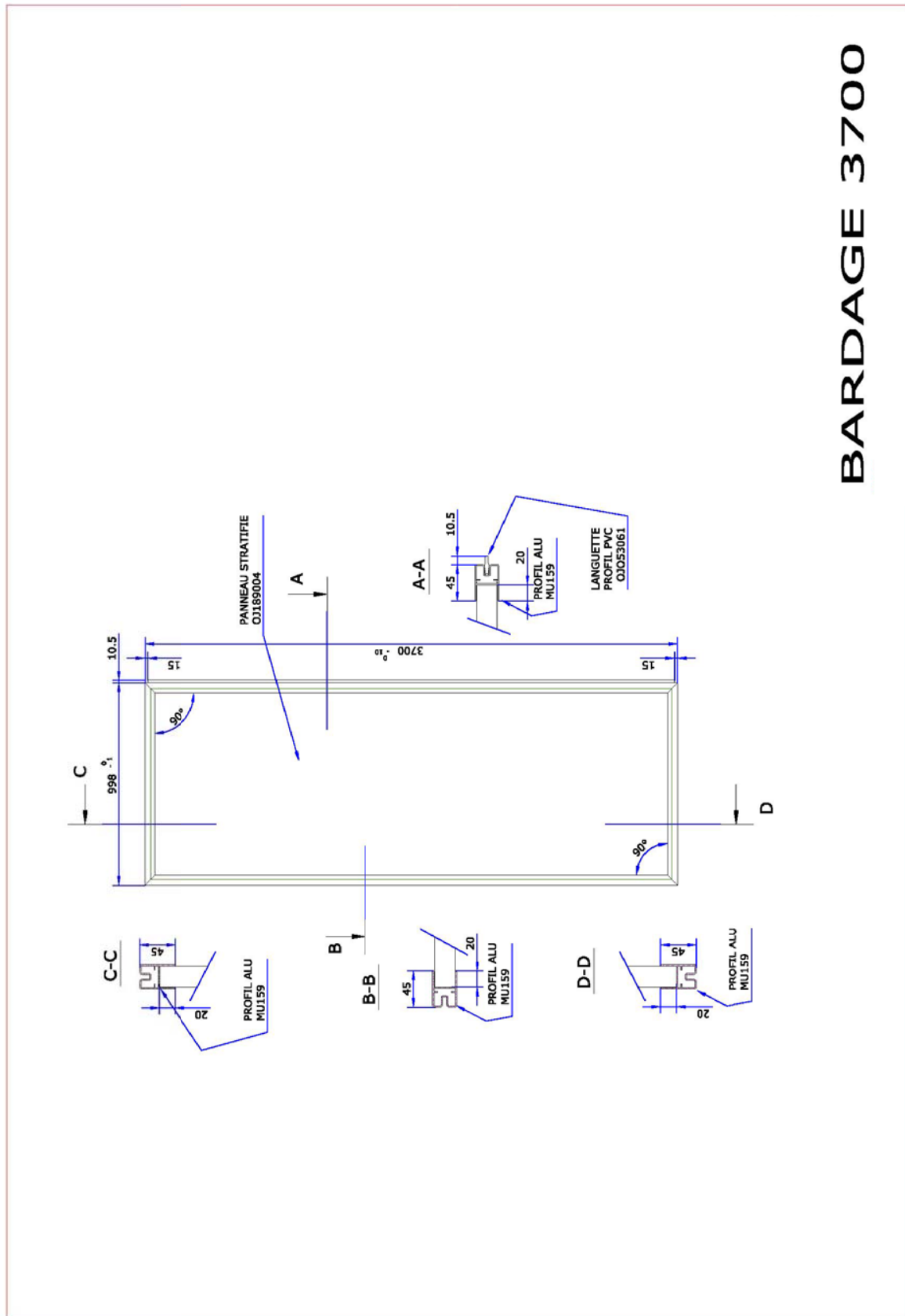
- an outer frame called the "**RING BEAM**"
- girders called "**BEAMS**" with supports
- decking made of plywood units stiffened by aluminium frames called "**CASSETTES**"

### Quality of materials

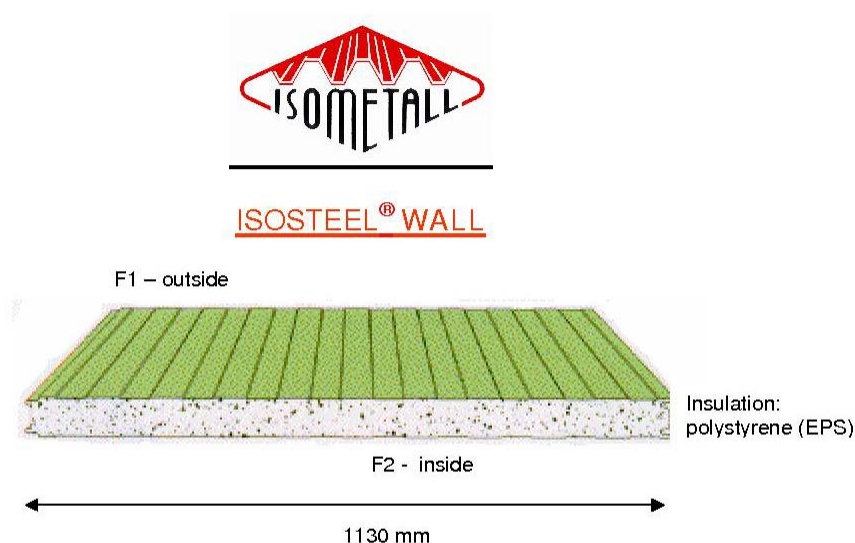
- The profiles for the "**RING BEAM**" and cassette stiffeners are grade 6061 T6 extruded aluminium for the ring beam, 24 daN/mm<sup>2</sup> yield point and grade 6106 – R27, 27 daN/mm<sup>2</sup> yield point for the cassette stiffeners.
- The steel beams are produced from steel moulds obtained by forming narrow E 36 steel strips.
- Load scenario: The different components are sized to resist excess loads of **500 daN/m<sup>2</sup> (5kPa)**.



## EXTERNAL HARD PANEL



## EXTERNAL HARD PANEL



Load bearing sandwich panel for insulated wall cladding  
A1 fire classification, auto-extinguishable  
Visible fastening (for invisible fastening, see ISOSTEEL® WALL INV).

### APPLICATION

Wall structures for industrial, agricultural and commercial buildings.  
More in particular: industrial halls, sports facilities, shopping centres, stables, trade fair halls, ...  
Can be used for buildings with low to medium humidity.

### DESCRIPTION

#### Sheets

Galvanised and coated steel sheets according to the EN 10-147 and P 34-301 specifications.  
Steel sheets thickness: F1  $\varnothing$  outside: 0,63 or 0,75 mm, F2  $\varnothing$  inside: 0,40 mm (other thickness on request).  
Colours and coating specifications: [see document sheets and coating](#).

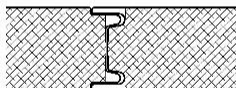
#### Insulation core

Polystyrene (EPS). Thickness 50 to 140 mm.  
Coefficient of conductivity  $\lambda$  : 0,036 W/m°C for a density of 20 kg/m<sup>3</sup> auto-extinguishable.  
Atg Approval 99/H761/2 UB Atc 2 July 1999.  
For more details see [technical files](#).

#### Dimensions

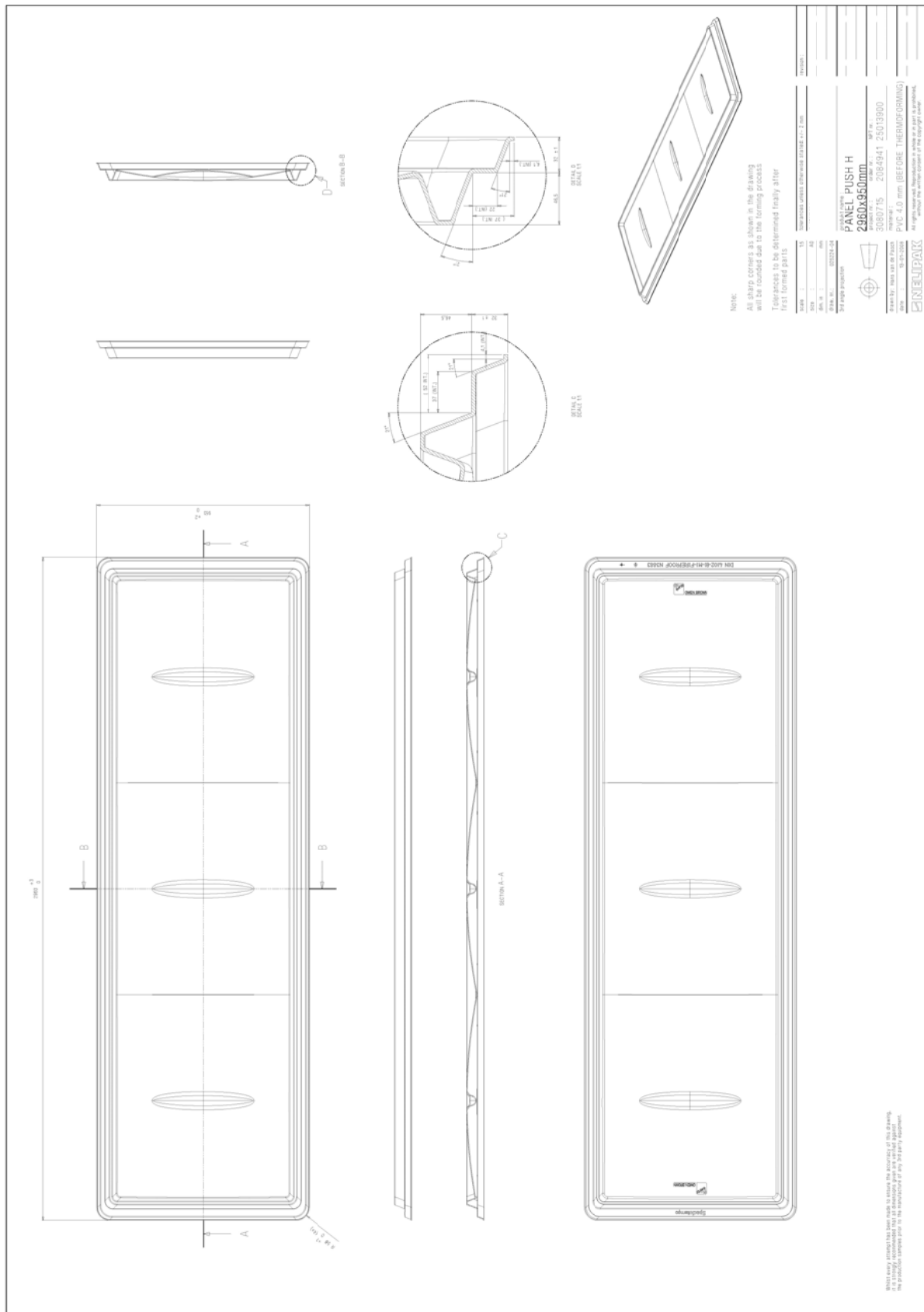
Net width: 1130 mm. Maximal length: 14 meters.

#### Interlocking



For variant of cladding with invisible fastening, see ISOSTEEL® WALL INV

## EXTERNAL HARD WALL PANELLING FOR INTERNATIONAL ZONE TRANSPORT MALL





## INFLATABLE FABRIC DUCT SYSTEM FOR AIR CONDITIONING DUCT

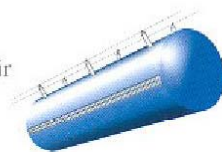
### « IMPULSION » AIR DISPERSION SYSTEM



### « ENERGY » AIR DISPERSION SYSTEM



Medium to high speed air  
dispersion through  
micro-jets lines



Wide range of air dispersion speeds  
2 to 12 m/s or 180 to 2300 ft/min

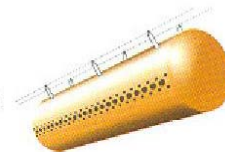
- Dispersion range : normal to long
- Less diffusers and ductwork
- Also applicable for reversible units
- Dispersion with air induction
- Lower clogging rate

- Limited differential between blowing and local temperatures if reversible unit

**Heating, cooling, air-conditionning,  
ventilating and air-curtains in :**

- Limited height factory buildings
- Food processing industries
- Stores and public buildings

Medium to high speed air  
dispersion through a pattern  
of calibrated holes



Wide range of air dispersion speeds  
8 to 25 m/s or 1500 to 4800 ft/min

- Dispersion range : normal to very long
- Less diffusers and ductwork
- Limited importance of temperature differential
- Possible to use high temperature differentials
- High induction rate available
- Practically no clogging problems

- High external static pressure can be necessary

**Heating, cooling, air-conditionning,  
ventilating and antifreeze protection in :**

- Maximal height factory buildings
- Industrial sites
- Stores and public buildings



## INFLATABLE FABRIC DUCT SYSTEM FOR AIR CONDITIONING DUCT

### PLAIN FLEXIBLE FABRIC DUCTWORK

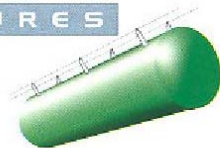


### « RADIANT » AIR DISPERSION SYSTEM

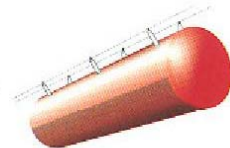


### MAIN FEATURES

Flexible technical fabric ductwork to transfer air from one point to another



Low speed air dispersion through a large surface of porous fabric.



### ADVANTAGES

- Very light weight
- Simple installation hardware
- Fully washable ductwork
- Pleasing colours and shapes
- Noiseless ventilation
- large range of fabrics available

- Very low air dispersion speeds  
0,1 to 0,8 m/s or 20 to 150 ft/mn
- Dispersion range : short
- Comfort, even beside the diffuser
- No induction, no draughts
- Dispersion by air displacement
- Less airborne particles (filtration effect)

### LIMITS OF USE

- Mainly for supply air ductwork

- Mainly refrigeration (heating = stratification)
- Clogging rate imposes filters

### APPLICATIONS

- Hygiene controlled ductwork
- In case building structures can't support heavy metal ducts
- Rapid installation time
- Export (low freight price)

- Cooling, air-conditionning and ventilating in :
  - Food processing & clean industries
  - Offices
  - Laboratories and clean-rooms

## INTERNAL PARTITION

### Wall Panels



### Wall Top Extension

This is an additional wall element joined on above. Instead of the adjustable feet of the lower wall panel, it has a mounted tongue connection which neatly interlocks with the panel below, once again achieving perfectly flush, pristine and continuous wall surface.

**Dimensions and prices are the same as with basic wall panels.**

G40	WA0.1000.1000	1000x1000mm, no visible joints
G40	WA8.1000.1000	1000x1000mm, with an 8mm joint

**WA8...** Instead of the adjustable feet, it comes with 38mm tongue connections mounted. Into the 8 mm joint created in this way, other forms of connector can be inserted.

**WA0...** Instead of the adjustable feet, it comes with 28mm tongue connections mounted, creating a perfectly flush join between the lower and upper panels. This combination can only be used where the connections do not clash with the panel's edge groove - thus it will not work with L2, T2, T3 or T4 nor with X2, X3 or X4. Alternatively, instead of the 6mm panels, small-size 1mm panels (**Platte.klein.1mm**) can be used, so that any connection using the WA0 tongue then becomes possible. These panels are obviously less robust!

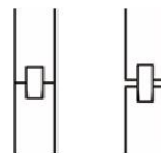
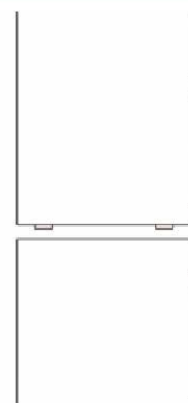
Our connection sets are routinely delivered with 6mm boards - small-size 1mm boards must always be ordered specially!

In addition, the wall top extensions can be attached using **locking pins**. Cross **bolts** and **locking pins** firmly interlock the wall panel with the top extension and the resulting combination can be used as one large wall panel.

**A wall cannot stand by itself!**  
**Make sure the walls do not wobble!**

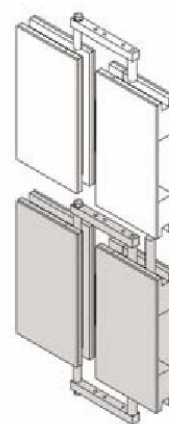


! wall top extension connector p.34 !



WA0 28 mm tongue

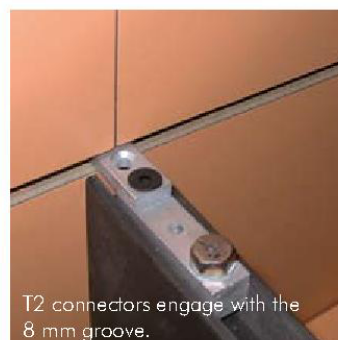
WA8 38 mm tongue



Wall top extension with 38 mm tongue connection...



... result in a 8 mm groove.



T2 connectors engage with the 8 mm groove.

G40

## INTERNAL PARTITION

### G40 - Panel Connection System



#### G40 - Assembly

Stunningly Simple - a Perfect Result!

# G40

G40

#### Step 1

Setting up the first wall using pre-assembled connectors...



#### Step 2

The second wall is joined to first using the connectors...



#### Step 3

Now the connectors are no longer visible...



#### Step 4

If necessary, adjust the connector's position by loosening the off-centre seated screw, and it's ready to go!





## INTERNAL PARTITION

### G40 - Panel Connection System



G40

#### The Wall

Ecological, Sturdy and Distinctive

The 40mm thick wall is a lightweight sandwich construction and consists of a robust MDF (Medium density fibreboard) framework, a central layer made from lightweight and non-polluting paper honeycomb and HDF with laminated plastic coating.

The fittings are concealed in a 16 mm groove around the circumference.

The pre-assembled feet and tongue connections make assembly fast and easy and guarantee a flush wall surface. The connectors are inserted into the drilled holes at the edges.

**The dimensions of our standard wall units are:**

**3000x1000mm**

**2500x1000mm**

Any other dimension and finish are available.

#### Individual surface finishes

The walls can be coated on either side with a range of currently available surface finishes. With this option the expense of foil can be avoided.

**Laminated plastic, plywood, veneer, lacquer, three ply boards, HDF which can be painted, MDF**



[surface finishes p.20](#)



## INTERNAL PARTITION

### G40 - Wallsystem



G40



### G40 - The Connection System

The G40 wall system combines function and elegance.

Single stand elements, such as walls, towers, door frames or door surround panels can all be interlinked by means of aluminium connection fittings.

The 40mm lightweight walls are a sandwich construction with a central layer made from non-polluting paper honeycomb.

Once assembled the walls have a perfect, flush surface with no visible connections to spoil the sleek effect.

## INTERNAL PARTITION

### G40-Twin



### G40-Twin

**70 to 150 mm** lightweight wall, honeycomb paper filled MDF frame, with an outer layer on each side made up of a 3mm or 5mm HDF panel coated with a 0.8mm pearly white laminated plastic surface. It has a double groove around the outside edge, with four pre-drilled connection holes in each corner, available with a transformer slot **where appropriate**, all **G40 fitting** sets can be used, **can be combined with G40 wall elements**.



70-150mm  
according to your requirements.

G40.	TWIN.150.xxxx.xxxx	70-150mm
G40.	TWIN.70.xxxx.xxxx	



lightweight



customized dimensions available



surface finishes p.20



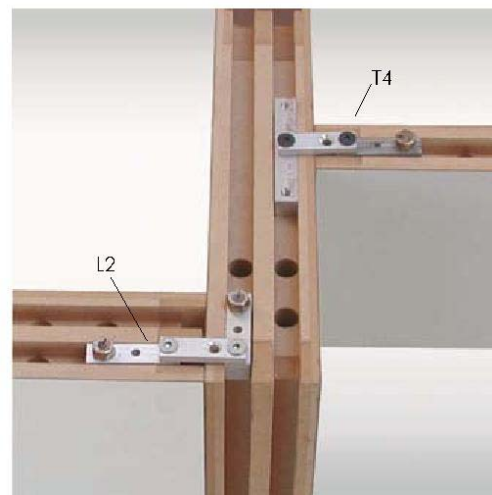
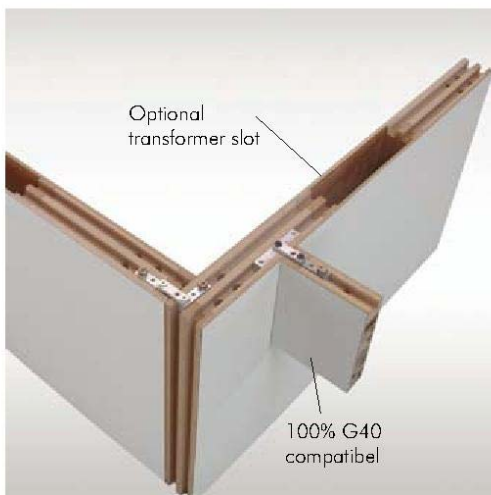
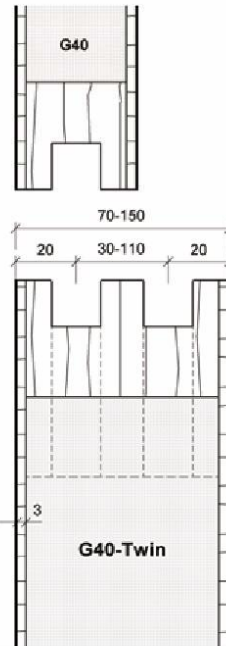
When the G40 Twin is provided with a transformer slot, 5mm HDF panels are used.



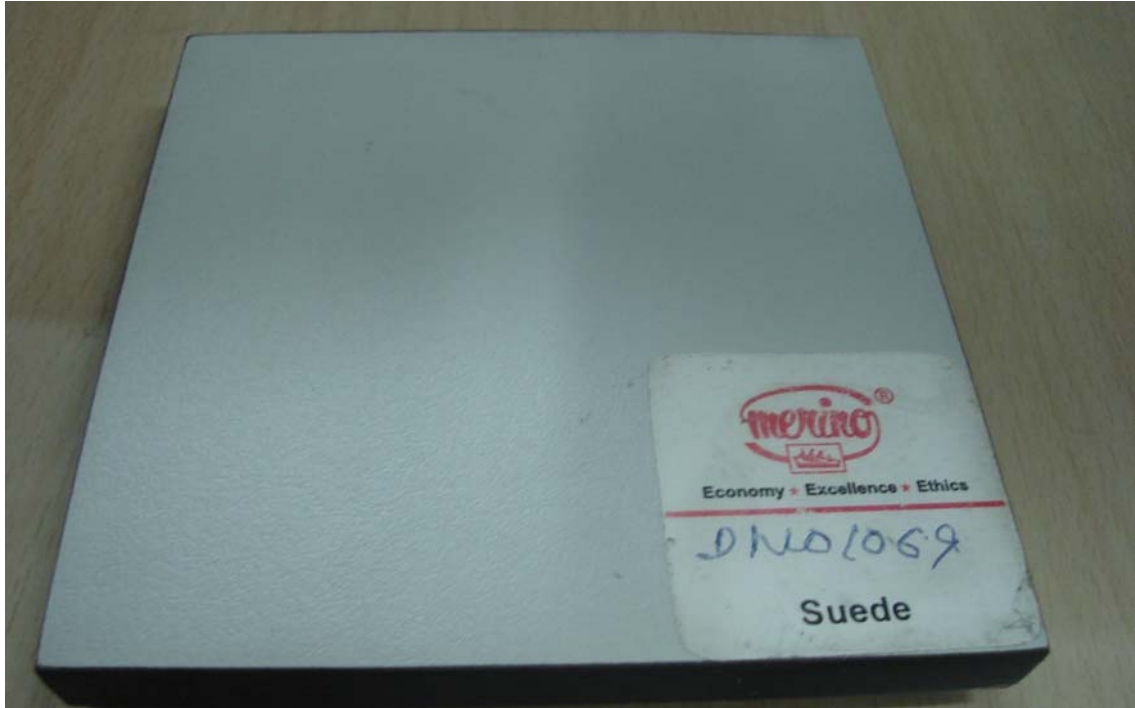
Can be combined with G40 wall elements !



If the walls need to exceed a thickness of 150 mm double walls can be built!

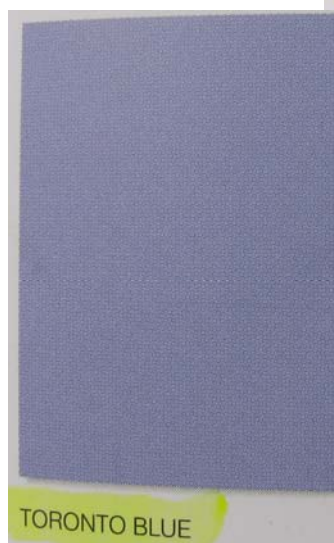


**WASHROOM CUBICAL SYSTEM**





## WASHROOM TILES



## PLUMBING FITTINGS

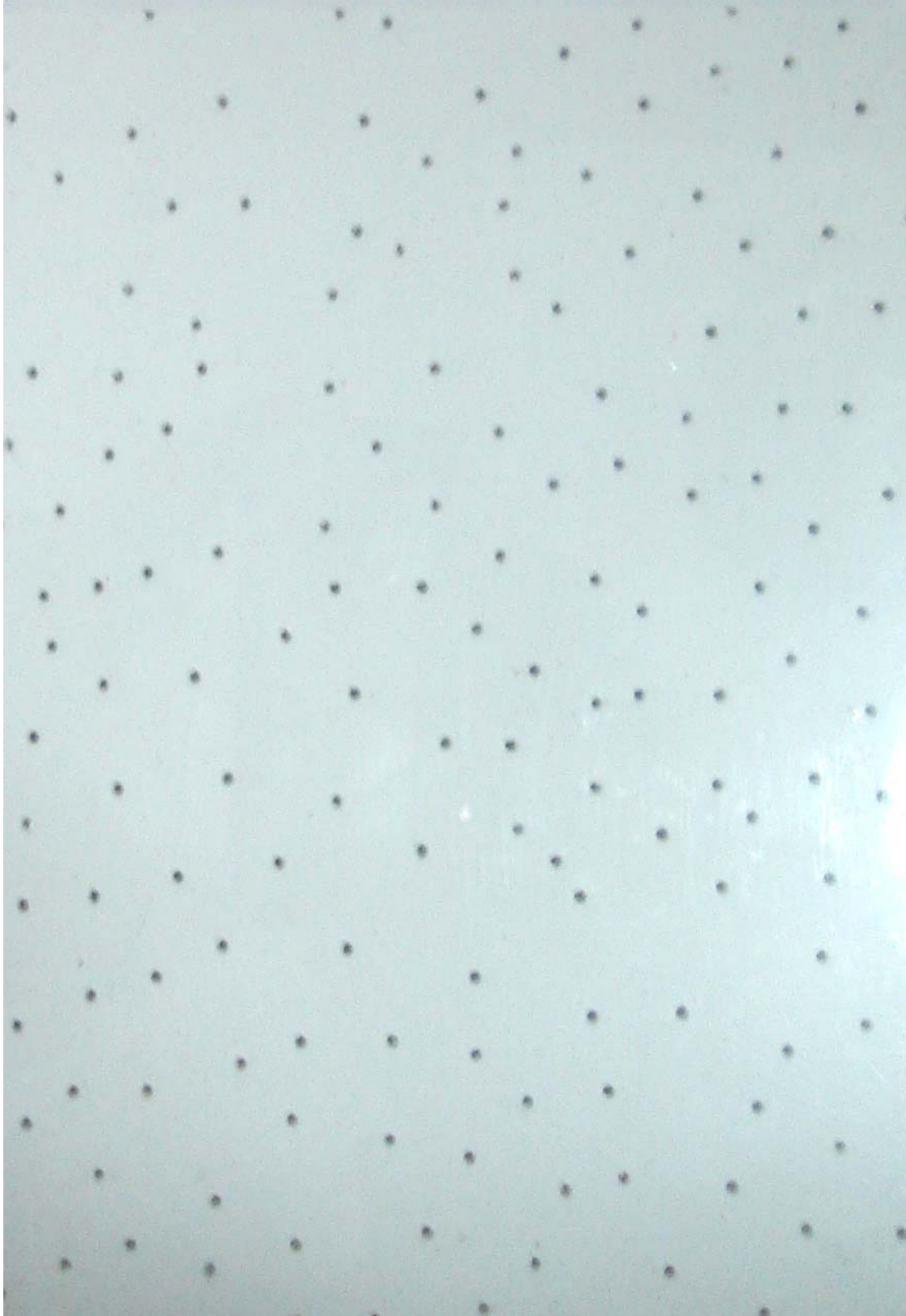


**FALSE CEILING TILES**

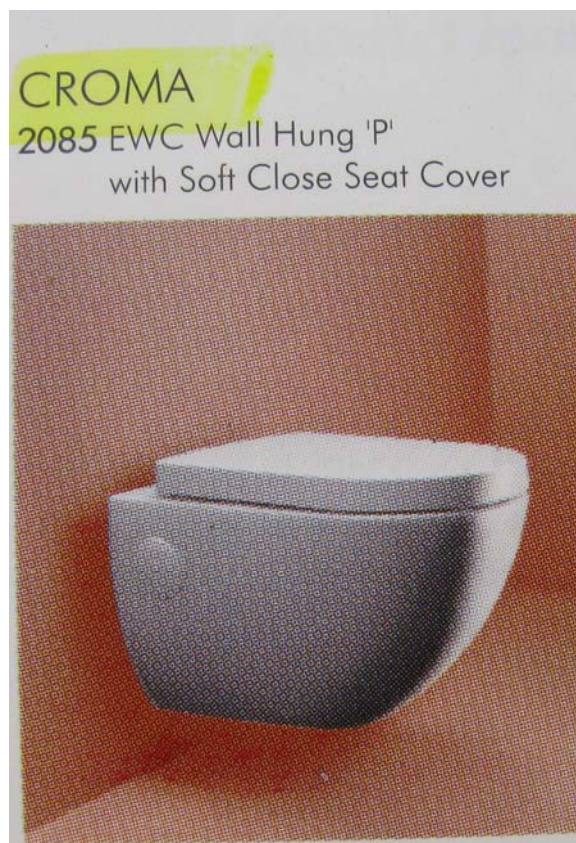
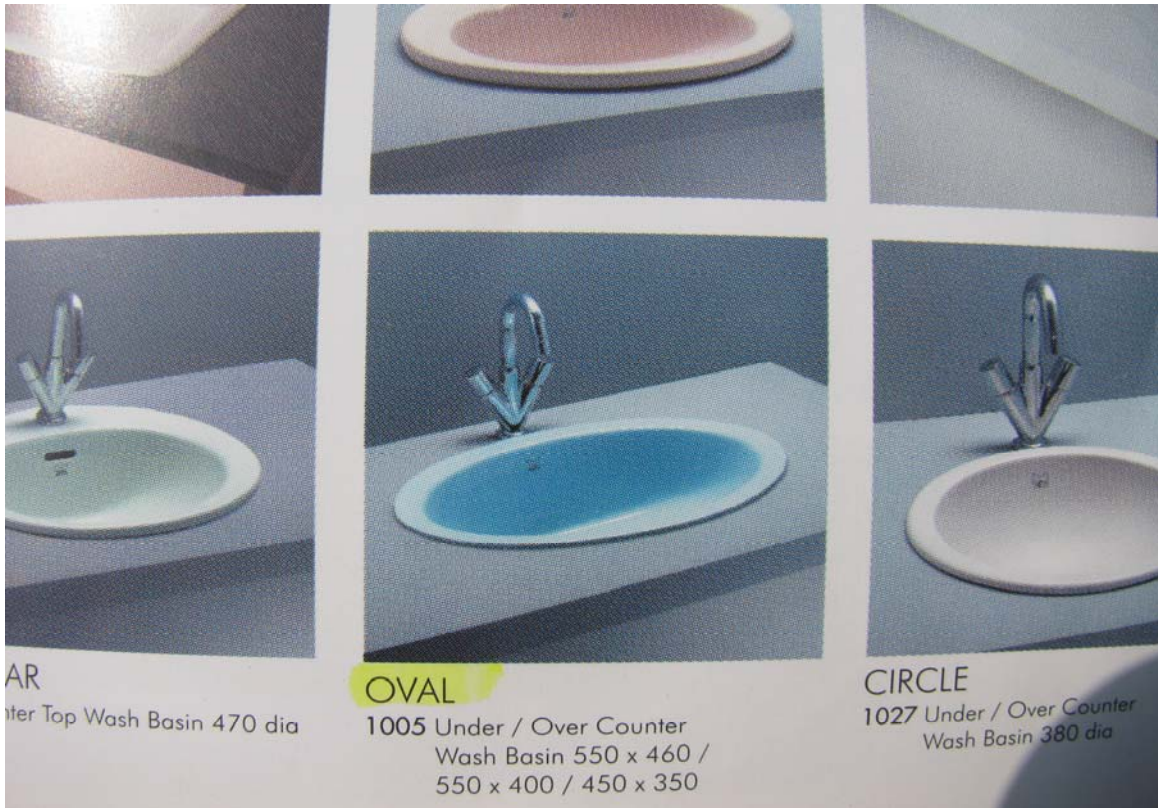




**FALSE CEILING TILES**



## SANITARY FIXTURES



### 18.3.15 Internal Electrical Installation & Power Outlets

#### 18.3.15.1 General

- Illumination levels for inside and outside shall be designed and executed as per the Venue Brief by OC (extract enclosed) / BIS / BS / ISO / IEC.
- All electrical panels / DB's shall have 25% spare capacity and outlets.
- All DB's shall be provided with RCCB's.
- Cable Trays, Hangers where-ever required shall be provided. No wire shall be laid loosely along the wall, ceiling or floor. All the wires shall be neatly dressed and properly placed in workmanship manner.
- All material like switch boards / cables / wires / MCCB's / MCB's / Fittings etc. should be ISI / BS or other international standard and used only after prior approval of Electrical Engineer In-charge.
- All electrical safety requirements as per I.E Rules / CPWD Specifications shall be followed.
- Power distribution from feeder pillars shall be made with the run of:
  - i). XLPE U.G / Armoured Power Cabling confirming to IS: 1554 or other international standards.
  - ii). Cable shall be laid as per requirement of site / direction of the Engineer-in-Charge.
  - iii). All switch boards for power distribution shall be new and only MCCB's / MCB's shall be used.
  - iv). All cable / wire sizes shall be decided on current rating / voltage drop calculation / short-circuit rating as per International standards.
- Schematic Line Diagram from Feeder Pillars upto DB's, indicating cables sizes, switch board ratings, specification shall be prepared and got approved from the Electrical Engineer-in-charge before procurement of material / execution of the work.
- Beyond DB, Wiring shall be done as per International standard with run of multi-stranded FRLS copper conductor cables.
- The contractor shall co-operate and assist any other supplier or user in terms of avoiding conflict with hangings, decorations, liners and the like.
- The "Testing & Tagging" of electrical system from a light fitting to a sub-board (including switching) is the responsibility of the contractor.

#### 18.3.15.2 Standards / Makes

Makes / Model and Photographs of the electrical fittings and fixture to be used shall be mentioned in the proforma as given below.

S.No.	Description	Standard	Make / Model	Photograph
1.	Electrical Fittings			
2.	MCCB's / MCB's			
3.	Distribution Board			
4.	Cables			
5.	PVC Insulated Copper Wires			
6.	Steel Conduit			



S.No.	Description	Standard	Make / Model	Photograph
7.	Modular Switch / Socket / Fan Regulator			
8.	Ceiling Fans			
9.	Main Electrical Panel			

### 18.3.16 AIR CONDITIONING & VENTILATION

#### 18.3.16.1 General

Air Conditioning work shall be designed and executed as per the Venue Brief by OC (extract enclosed) / BIS / Ashrae / CPWD Specifications.

#### 18.3.16.2 Specifications and Conditions:

##### Dining Hall

- |   |  |               |
|---|--|---------------|
| 1. Dining Hall Seating-I -                                | $22^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$   | RH 65% to 40% |
| 2. Baggage Claim Area }<br>Food Service<br>Service Pantry | $22.5^{\circ}\text{C} \pm 2.5^{\circ}\text{C}$ | RH 65% to 40% |
| 3. Kitchen Area   | Ventilation as per NBC                         |               |
| 4. Toilet, Storage  | Ventilation as per NBC                         |               |

##### Transport Mall

- |                               |                                       |               |
|-------------------------------|---------------------------------------|---------------|
| 1. Transport Operation Centre | $20^{\circ}\text{C} \pm 1.50\text{C}$ | RH 65% to 40% |
| 2. Armouey                    | $22^{\circ}\text{C} \pm 1.50\text{C}$ | RH 65% to 40% |
| 3. Toilets/ Store             | Ventilation as per NBC                |               |

##### Operation Zone-I and II

- |                          |                                       |               |
|--------------------------|---------------------------------------|---------------|
| 1. Office Areas          | $22^{\circ}\text{C} \pm 1.50\text{C}$ | RH 65% to 40% |
| 2. Technology Ware House | $22^{\circ}\text{C} \pm 2.50\text{C}$ | RH 65% to 40% |
| 3. Work Force Check In   |                                       |               |
| 4. House Keeping Storage |                                       |               |
| 5. Ware house            | Ventilation as per NBC                |               |
| 6. Toilets/ Store        | Ventilation as per NBC                |               |

##### International Zones

- |                |  |               |
|----------------|--|---------------|
|                | $22^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$ | RH 65% to 40% |
| Toilets/ Store | Ventilation as per NBC                       |               |

##### Resident Centers/ CGA Services Centers/ Sports Information Center/ Religious Center/ Polyclinic

- |                               |                                       |               |
|-------------------------------|---------------------------------------|---------------|
| 1. Recreational/ office areas | $22^{\circ}\text{C} \pm 1.50\text{C}$ | RH 65% to 40% |
| 2. Laundry/ storage/ toilets  | Ventilation as per NBC                |               |

##### Casual Dining

- |                     |   |               |
|---------------------|---|---------------|
| 1. Dining Areas     | $22.5^{\circ}\text{C} \pm 2.50\text{C}$ | RH 65% to 40% |
| 2. Baggage/ Kitchen | $22^{\circ}\text{C} \pm 1.50\text{C}$   | RH 65% to 40% |
| 3. Toilets/ Store   | Ventilation as per NBC                  |               |

The Air Conditioning System designed by the contractor may include:

- Large, flexible or inflatable ducted system
- Large (high capacity) direct discharge individual units, and / or
- Smaller capacity direct discharge units.

The contractor shall take into consideration space restrictions for some units in close proximity to other facilities. Allow for all ancillary equipment, fixtures and fittings required to fully complete each installation.

**Controls** – The contractor shall supply, install and commission all controls necessary to provide the correct performance of the equipment in accordance with the manufactures published data regarding air flow and cooling effect to maintain the specified conditions in the area being serviced.

#### **Air Conditioning Ducts**

Please refer technical specifications para 12.3.10.

#### **Exhaust provisions**

Adequate air exits shall be provided (e.g. via custom-made marquee exhaust walling or by the supply of dedicated exhaust units or air relief louvers in the gable ends of the structure) to ensure the appropriate flow of cooled air through and within the marquee.

#### **18.3.16.3 Standards / Makes**

Makes / Model and Photographs of the electrical fittings and fixture to be used shall be mentioned in the proforma as given below.

S.No	Description	Standard	Make / Model	Photograph
1.	AHU (Double Skin) Sectional Type / Ceiling Hung Type			
2.	AHU Fan Section for Fresh Air / Exhaust etc.			
3.	Pumps & Controllers			
4.	Kitchen Scrubber / Air Washer			
5.	Electrical Panel			
6.	Electric Motors (TEFC)			
7.	Starters			
8.	MCCB / MCB			
9.	Push Button / Auxilay Relays / Contactors			
10.	Pipes and Fittings (MS / GI) Upto 150mm dia Above 150 upto 450mm dia			



S.No	Description	Standard	Make / Model	Photograph
11.	Butterfly Valves / Non-Return Valves / Check Valve			
12.	Balancing Valves			
13.	Motorized Butterfly Valves			
14.	Two Way Valves / Thermostat / Humidity Stat			
15.	Insulation Expanded Polythelene (TF Quality) Pre-Moulded Pipe Sections / Slabs Cross Linked Polyethylene Glass Wool			

### 18.3.17 Fire Alarm, Fire Fighting & Fire Extinguisher

#### 18.3.17.1 General

- The Work shall be designed and executed as per the Venue Brief by the OC (extract enclosed) / IS / NFPA / EN / BS standards.
- The work shall be carried out as per BIS. In addition to fire control panel in each structure / building; central monitoring panel for all buildings /structures is to be located at one central place.

#### 18.3.17.2 Standards / Makes

Makes / Model and Photographs of the electrical fittings and fixture to be used shall be mentioned in the proforma as given below.

S.No.	Description	Standard	Make / Model	Photograph
1.	Copper Cables			
2.	Main Fire Alarm Panel, MCP, Detectors, Sounders and Control Modules etc.			
3.	Fire Extinguishers			
4.	Batteries			

### 18.3.18 External Lighting of Embankment along Bund Road

#### 18.3.18.1 General

- The average illumination level of 30 LUX should be provided on the embankments on the both sides of the Bund Road.

#### 18.3.18.2 Specifications and Conditions:

- All the cables and feeder pillars should have 25% spare capacity.
- All material should be as per IS / BS or any other international standards as approved by DDA and used only after prior approval of Engineer-in-charge of DDA.
- All electrical safety requirements as per I.E Rules / CPWD Specifications shall be followed.

### 18.3.18.3 Standards / Makes

Makes / Model and Photographs of the electrical fittings and fixture to be used shall be mentioned in the proforma as given below.

S.No.	Description	Standard	Make / Model	Photograph
1.	Electrical Fittings			
2.	MCCB's / MCB's			
3.	Distribution Board			
4.	Cables			
5.	PVC Insulated Copper Wires			
6.	Steel Conduit			
7.	Modular Switch / Socket / Fan Regulator			
8.	Ceiling Fans			
9.	Main Electrical Panel			

## 18.4 Extract from the Venue Brief by Organising Committee Commonwealth Games Delhi 2010

### “5.4 Electrical Power

#### 5.4.1 General

*A reliable, safe and secure power system with minimal disruption to the working of the Village during external and internal disturbances of the power supply shall be provided for the Commonwealth Games. The electrical systems shall be designed using the latest technology to provide an energy efficient system that is reliable and maintainable over the design life of the equipment, meeting the functional requirements of the village in Games mode.*

*The village precinct shall comprise of three distinct “zones”:*

- *International Zone*
- *Residential Zone*
- *Operational Zone*

*Electrical services should include the following, but not be limited to:*

- *Pit and conduit system for main services trunks around the site;*
- *Main Switchboards and metering;*
- *Distribution Boards;*
- *Submain reticulation including provision for critical supplies;*
- *Final sub-circuit wiring;*
- *Cable ladder and Trays for all services;*
- *Uninterruptible Power Supplies;*
- *General Purpose Power;*
- *Special Purpose Power;*
- *Public Address and Sound Systems;*
- *Architectural Lighting;*
- *Security;*
- *General Lighting;*
- *Floodlighting;*

- *Temporary Security Lighting;*
- *Emergency and Exit Lighting;*
- *External and Precinct Lighting;*
- *Lightning Protection and Earthing;*
- *Temporary cable pathways for power, temporary structures, technology/communications and broadcast.*
- *Generators.*

#### **5.4.2 Standards and Requirements**

*In addition to the general standards, the electrical power system shall comply to but not necessarily limited to the following specific standards and requirements.*

- *Requirements of DDA.*
- *Requirements of the Commonwealth Games Federation.*
- *Requirements of the Host Broadcaster for the Commonwealth Games 2010.*
- *National Building Code of India.*
- *Telecom Regulatory Authority of India.*
- *Latest revision of relevant British and Indian Standards (latest date of either Standard takes precedence).*
- *BSES Rajdhani/Yamuna Power Ltd Supply and Installation Rules.*
- *ISO/IEC latest revision of Information Technology Standards (previously IEEE).*

#### **5.4.3 Coordination**

*Unless otherwise approved cabling and equipment should be either installed above anticipated sight lines or concealed. Coordination with other services should be managed to maintain required separations and to minimise the exposure of any cabling or equipment to mechanical impact.*

#### **5.4.5 Electrical Design Parameters**

*The electrical supply characteristics shall be as follows:*

- *415 volt, 3 phase, four wire, 50 Hz; and*
- *MEN Earthing throughout.*

*A fault level at the main switchboard shall be determined by the Design Consultants and the supply authority. A method of easily determining the power usage during the Games period shall be provided. For the legacy.*

#### **5.4.7 Uninterruptible Power Supplies (UPS)**

*Uninterruptible Power supplies (UPS) shall be provided to isolate the load from mains power transients or disturbances in voltage and frequency. UPS shall also supply conditioned power to the load for a specified period of time after input supply failure, in order to either support the load until the event has concluded or provide sufficient time to close down the computerised network systems. All UPS shall be capable of safe, unattended operation and generally be designed to comprise the following systems:*

- *Rectifier/Battery Charger.*
- *Inverter.*

- *Battery Cabinet (ventilated).*
- *Synchronous Static By-Pass Switch.*
- *Manual Maintenance By-Pass Switch.*

*All necessary associated equipment, protection devices and controls including isolating switches, circuit breakers, instruments, alarms, monitoring voltage free contacts and displays.*

*UPS shall be provided for the following equipment:*

- *Key servers; and*
- *Security Systems.*

#### **5.4.8 Main Switchboards**

*Safe, secure, reliable compartmentalised main switchboards are required for Games village and ongoing legacy use, and shall be designed for the electrical load of each zone of the village. Zones with extremely high electrical loads or large spatial footprints may require more than one switchboard, however, the requirements will remain the same for each switchboard. The generator supply busbar via an automatic transfer switch shall receive supply from either a permanent or standby generator connectors external to the switchboard. The main switchboards shall include 25% spare capacity/spare spaces for future. Each main switchboard in Games mode shall be supplied from a high voltage feeder and/or part generator supply which shall comprise the following:*

- *Essential supply busbars*
- *Non-essential supply busbars*
- *Generator supply busbars*

*Games main switchboards shall be free standing, metal clad type, front connected, incorporating the following minimum requirements:*

- *Form 3b segregation and separation.*
- *3 phase and neutral busbar assembly. (Rating to be determined during the design).*
- *Air circuit breakers (fully withdrawable) for non-essential incoming supplies.*
- *Power analysers for recording, trending, peak load analysis etc complete with BMS or stand alone software communications interface.*
- *Bus-tie between feeder incoming ring supplies.*
- *Phase failure relays interfaced with BMS.*
- *Programmable Logic Controllers (PLCs), and supporting UPSs.*
- *Authority Metering.*
- *Automatic Transfer Switches.*
- *Surge Arrestors.*
- *Moulded Case Circuit Breakers.*
- *Busbars (suitably rated).*
- *Type tested construction.*
- *Provision for Power Factor Correction Cubicle.*
- *Provision for check metering.*

*It shall be noted that temporary main switchboards should be designed such that they could be reused after the Games, possibly to be relocated elsewhere as the temporary facilities are removed and the site developed for long term legacy use.*

#### **5.4.10 Consumer Mains**

*Consumer mains shall be suitably rated to accommodate the maximum demand of the village zone it serves and it is recommended to include 25% spare capacity. Consumer mains shall comprise of either solid low impedance copper busduct or copper cables enclosed in fire rated construction in accordance with the Supply Authority requirements. Length of run should be kept to a minimum.*

#### **5.4.11 Submains**

*Submains cabling shall be robust, reliable and concealed from view, reticulating from the main switchboard to load centre distribution boards throughout the precinct.*

*All submains shall be designed and sized using maximum demand calculations, voltage drop and earth fault loop impedance calculations with appropriate 25% spare capacity.*

*The type of submains should generally be broken into three categories (Essential, Non-Essential and Mains/Generator). Designers shall determine the cable types depending on the category of the submains.*

*Essential supply submains should be designed in accordance with the standards for fire and life safety equipment and shall have fire and mechanical protection dependant on reticulation conditions. Generator supply submains also need to be fire rated, and should have mechanical protection. Designers should allow for the provision of temporary submains in Games mode for but not necessarily limited to the following:*

#### **From International Zone Temporary Main Switchboard:**

- *Main Entrance.*
- *Village Media Centre.*
- *Commercial Centre.*
- *General Store.*
  - *Bank.*
  - *Call Centre and Mobile Phone Store.*
  - *Hair Salon.*
  - *Travel Agent.*
  - *Merchandise Store.*
  - *Commercial Centre Post Office.*
  - *Ticket Office.*
  - *WADA Outreach Office.*
  - *Florist.*
  - *Dry Cleaning/Alterations.*
  - *Photo and Camera Store.*

- *Electrical Appliance Store.*
- *Cyber Cafe*
- *Recreational Centre.*
- *Bar*
- *General lighting and power (common areas)*
- *General air conditioning and ventilation*
- *Other spaces provided in this zone.*

***From Residential Zone Games use Main Switchboard:***

- *CGA Facilities*
- *Resident Centre(s) (at least 10 off) Games Facilities only*
- *CGA Services Centre*
- *Sports Information Centre*
- *Chef de Mission*
- *Main Dining Room (include kitchen, preparation, staff and casual dining)*
- *Polyclinic;*
- *Religious Centre; and*
- *Other spaces provided in this zone.*

***Residential Sporting Facility Main Switchboard:***

- *Fitness Centre*
- *Indoor Hall(s) (could be 2)*
- *Pool*
- *Athletics/Playing Field*
- *External lighting and power; and*
- *Other spaces and facilities provided in this zone.*

***From Operational Zone Main Switchboard:***

- *Access Control Points*
- *Vehicle Check Points*
- *Transport Mall*
- *Accreditation Centre*
- *CGA Parking*
- *Village Motor Pool*
- *Village Operations Centre*
- *Security Command Centre*
- *Logistics and Technology Centre*
- *Staff Centre*
- *Housekeeping*
- *Other spaces and facilities provided in this zone.*

**5.4.12 Distribution Boards**

*Distribution Boards are required for the safe, reliable distribution of electrical circuits to equipment throughout the precinct. Distribution Boards shall be located throughout the precinct and buildings regardless of whether they are of a temporary or permanent nature.*

*General or utility distribution boards should be of the wall or floor mounted sheet steel cubicle type suitable for accommodation in separate electrical cupboards, or if temporary mounted, securely installed on a suitable unistrut or similar metal frame. Distribution boards should be Form 1 construction and degree of protection of IP40. Distribution Boards shall incorporate proprietary copper busbar systems suitable for installation of interchangeable 1, 2 or 3 phase circuit breakers. Busbars shall have a minimum fault current rating of 20 kA for 0.1 second.*

*Distribution boards should be equipped with all circuit breakers necessary for the connection of all submain and sub circuit cabling required for equipment, lighting and power installation. Distribution Boards shall be located and dressed to minimise their visual impact, especially in high profile areas. Generally, all circuit breakers shall have a minimum fault rating of 10 kA, with the Design Consultants providing discrimination and grading throughout the installation including the use of fault current limiters where required.*

#### **5.4.13 Technology Distribution Boards**

*A separate dedicated Technology Distribution Board System shall be installed to provide a reliable power to serve Games technology equipment. These boards shall comprise Generator, Essential and Non-Essential separated sections where power is received from a village main switchboard (Non-Essential or Essential) and from the village generators supplying the generator supply busbar of a village main switchboard. Final subcircuits radiate out of the distribution board to serve technical equipment through a UPS.*

*The Design Consultants shall consider the provision of residual current protection circuit breakers installed in distribution boards for the connection of sub-circuit cabling associated with general purpose outlets. All technology distribution boards shall have a minimum 25% spare capacity at Completion for use during the Games.*

#### **5.4.14 Surge Protection**

*Surge Protection shall be provided in Games to all main switchboards and Games technology distribution boards. It is also recommended to provide surge protection for legacy main switchboards and distribution boards.*

*The protection shall eliminate surges, transients etc that are transmitted in the supply authority networks as well as lightning strikes to the building and surrounding ground.*

#### **5.4.15 Wiring, Cabling and Supports**

*A cable management system shall be provided that provides a logical coordinated reticulation system. All cable routes shall be rationalised where possible to reduce clutter and improve manageability. Separation distances required shall be maintained between different types of cables in accordance with applicable codes and regulations.*

*Where cabling and/or cable routes are temporary, the installation shall use existing routes where possible. However, where this is not possible the cabling shall be installed in a manner that minimizes damage to finishes and FF&E. Whilst, the installation should comply with all codes, a different approach can be taken to temporary installations rather than permanent.*

*Cables, supports and enclosures shall be designed to be concealed where possible utilising under plant spaces, ceiling spaces, unoccupied rooms such as plant rooms and stores and wall cavities etc. to run cables and enclosures on the surface. Within inaccessible locations cables shall be installed within conduits with accessible ends which allow installation and removal when work is complete. Cable ladders and trays shall be sized with 25% spare capacity.*

*The Design Consultants shall propose specific workable cable pathways using the legacy infrastructure, (pits, conduits, risers) and temporary cabling pathways on ground, in conduits and on duckboards over temporary pedestrian paths, temporary poles with cables strung between where cabling pathways on ground is impractical, and the use of permanent or temporary fencing to temporary support cables in some locations.*

*Underground cables shall be double insulated type in heavy duty Category A enclosures and clearly marked where cables enter and leave the village, either side of road crossings and where visible drawing pits do not clearly define routes. Cabling shall be of the multi-stranded copper conductors type for Games use and is recommended for legacy use with minimum size as follows:*

- *2.5mm<sup>2</sup> for power and lighting circuits*
- *1.5mm<sup>2</sup> for control circuits*
- *Equipment in accordance with manufacturers rating.*

#### **5.4.16 Sub-Circuit Requirements – Power**

*Sub-circuit reticulation shall be provided from each distribution board or Technology distribution board to the associated power outlets. The following outlines the maximum number of power outlets to be connected to an individual sub-circuit for various ratings:*

- *10A power outlets, (essential and non-essential)*
  - *Maximum 10 off (5 doubles) 10A outlets per 20 amp Single Pole Miniature Circuit Breaker (SPMCB) in air conditioned spaces.*
  - *Maximum 6 off (3 doubles) 10A outlets per 20 amp SPMCB in non air conditioned spaces.*
  - *4 off (2 doubles) 10A outlets per 20 amp SPMCB in concessions and bars areas (whether temporary or not).*
  - *A dedicated outlet and 20A SPMCB and circuit shall be provided serving equipment rated at more than 1000 VA.*
- *15A power outlets (essential and non-essential):*
  - *Maximum 1 off 15A outlet per 20 amp SPMCB.*
- *20A/32A power outlets, non-essential:*
  - *Maximum 1 off 20A outlet per 32 amp SPMCB.*
  - *Maximum 1 off 32A outlet per 40 amp SPMCB.*
- *Multi-phase Switched Power Outlets:*



- *Dedicated circuit and circuit breaker of appropriate rating with neutral to each.*
- *Direct Connected Equipment*
  - *Dedicated circuit of appropriate rating generally to each item.*
  - *A number of similar items, each rated at less than 1,000 VA may be connected to one*
  - *20 amp circuit provided total equipment rating does not exceed 3,000 VA and any excess*
  - *(starting) currents are not simultaneous.*
- *Lighting Outlets, Maximum Number:*
  - *Maximum 12 off outlets, with maximum total load of 1,500 VA per 10 Amp SPMCB.*
  - *Maximum 18 off outlets, with maximum total load of 2,500 VA per 16 Amp SPMCB.*
  - *Maximum 24 off outlets, with maximum total load of 3,000 VA per 20 Amp SPMCB.*

#### **5.4.17 Power Outlets**

*Power outlets are required for the safe, reliable connectivity of electrical appliances to the village electrical power systems in Games and legacy use. Power outlets shall be of the same make and manufacture throughout the village. Generally, each faceplate shall be recessed or surface mounted as applicable.*

*Power outlets shall be provided for all electronic equipment. The outlets shall be located adjacent to the equipment so that they can be directly plugged in. Outlets can be either permanent or temporary. Temporary outlets can utilise extension cables and power boards, providing codes are met. Outlets shall be installed in a manner that minimises damage to finishes and FF&E. Consideration should be given to the use of outlets that allow international plugs to be used.*

*Rooms or spaces with high demands for outlets shall have sufficient capacity for the number of outlets to be easily and economically installed, if they are not permanently installed. The Design Consultants shall determine the areas of high demand but shall include, but not necessarily be limited to, the following:*

- *All Media and Press areas;*
- *Cyber cafe*
- *All Technology spaces*
- *Kitchens and Service Areas.*

*Impact resistant weatherproof type outlets shall be installed where subject to adverse environmental conditions and mechanical damage. Power outlets are required for the safe, reliable connectivity of electrical appliances to the village electrical power systems in Games or legacy use.*

## **5.5 LIGHTING**

### **5.5.1 General**

*General lighting shall be provided to all habitable areas of the village, including storage and plant areas. It shall be fit for purpose, be efficient and flexible and form a functional part of the area it serves in accordance with the relevant codes and standards.*

### **5.5.2 Exterior and Precinct Lighting**

*A safe, reliable, efficient external lighting system shall be provided to ensure safe passage of all users in all zones of the Village. A selection of weatherproof wall, in-ground and pole mounted decorative and street luminaires shall be chosen to blend in with the external architecture. Suitable Low glare luminaires shall be used for all night or half night illumination on external pathways, landscaping, pick up, drop off and the external entrances, control points and parking areas.*

*External architectural luminaires shall be automatically controlled to suit the activity of the specific area. A separate temporary system shall be provided for the International and Operational zones associated with Games use. Road and street lighting should operate independently of these systems to the requirements of BSES.*

*In addition any external illuminated signage that is to be provided shall also be automatically controlled by the village lighting control system.*

### **5.5.3 Lamps**

*The Design Consultants shall select lamps/tubes for their life expectancy, colour rendering and energy efficiency. Consideration shall also be given to the use of electronic ballasts throughout the village to provide greater efficiencies.*

### **5.5.4 Lighting Control**

*A lighting control system shall be provided to effectively control the large quantity of luminaires. The system shall provide energy management, efficient and safe operation of the lighting network. The system shall be expandable, programmable and capable of controlling the loads associated with the public areas for interior and exterior lighting.*

*The security lighting levels adjacent to the entries to the village shall be integrated with dual technology motion detectors which detect unauthorised movement and activate the lighting to assist the CCTV surveillance cameras. Local switching shall be provided elsewhere, with light switches generally installed behind robust flush-plates. Surface mounted switches shall be installed on high impact mounting blocks of matching colour to the respective flush plates.*

### **5.5.5 General Emergency and Exit Lighting**

*Self-illuminated emergency and exit sign lighting shall be provided to code, for the safe evacuation of all users within buildings or temporary structures. Further to the regulative requirements for the provision of emergency luminaires and exit signs, additional units shall be considered for installation*

*in switchboard rooms, communications rooms, plant rooms and public toilets. Backup batteries shall be incorporated within each emergency luminaire and exit sign.*

## **5.8 MECHANICAL**

### **5.8.1 General**

*A Mechanical Services system shall be provided to provide a suitable environment for all users and equipment. Comfort conditions apply to all internal or enclosed spaces. The design solutions adopted shall be based on these facilities operating on a 24 hour 7 day per week basis for the entire operational period of the village. Mechanical services for temporary areas may be designed to accommodate only the weather conditions expected for the period of the Games.*

### **5.8.2 Energy Efficiency**

*For legacy components it is recommended that criterion for the design and specification of mechanical systems should be ecological sustainability and energy efficient. Example's of techniques which should be considered to minimise energy consumption and produce ecologically responsible design*

### **5.8.5 Ventilation**

*The areas listed as ventilation only in the Schedule of Requirements shall be provided with mechanical supply or exhaust air ventilation systems.*

### **5.8.6 Smoke Control**

*Smoke control systems shall be provided in accordance with international standards or where required by local authorities and be provided to all associated halls and indoor buildings in accordance with the local statutory requirements.*

*It is recommended that any smoke control system consist of roof mounted smoke exhaust fans with low level outside air make up systems. The capacity of smoke control system and control requirements of the smoke system shall be determined during the design and coordination phase in conjunction with the local fire authorities.*

### **5.8.7 Design Criteria**

*The design of all comfort conditioning systems for all temporary areas should be based on maintaining the specified internal conditions within the range of the expected weather condition of the Games period with the internal heat gains, population densities and ventilation rates as listed in this clause.*

### **5.8.8 Internal Light and Equipment Heat Outputs**

*All air conditioning and comfort conditioning systems should be designed to accommodate the light and equipment heat outputs that are to be provided in each space for these Games.*

*The detail of these heat outputs shall be determined at the early design stage of the facility in consultation with the Electrical Consultant. These internal heat outputs are to be taken as coincidental with peak internal population*

levels, outside air ventilation rates and external weather conditions in assessing system design requirements.

#### **5.8.9 Outside Air Ventilation**

Each comfort conditioning system and ventilation system should provide the minimum outside air for the peak design population densities in each space as required by the local authorities but should be no less than the values listed below. The determination of population levels shall be agreed by the organising committee during the early stages of the project.

##### **Non-Smoking Areas**

Meeting Rooms, Conference Rooms	5 l/s per person
Dining Room, Bar, Cyber Cafe	7.5 l/s per person
Lounges	7.5 l/s per person
Media Facilities	7.5 l/s per person
Office Areas	5.0 l/s per person
Commercial Centre	5.0 l/s per person
Recreation Centre	5.0 l/s per person
Residential Unit	To match exhaust air requirements

Swimming Pool / Sports Hall

1.0 l/s / m<sup>2</sup>

##### **Smoking Permitted Areas**

A minimum value of 20 l/s per person.

#### **5.8.10 Supply and Exhaust Air Ventilation**

All toilets, shower and common laundry areas shall be mechanically exhausted and be provided with a minimum exhaust air flow rate equivalent to 15 l/s / m<sup>2</sup> of floor area. In residential unit individual room bathrooms shall be provided with exhaust air flow rates as per local standards and codes.

Make up air to all non-public toilet and shower exhaust air systems and in residential units should be provided by the comfort conditioning supply air systems in adjacent areas. Make up air to other toilet areas should be drawn from the adjacent naturally ventilated circulation area.

All food preparation and cooking areas should be provided with separate exhaust air systems. All cooking exhaust air systems should be designed to discharge air vertically above roof level. Exhaust air flow rates should be designed to comply with ventilation standards of local authorities. Mechanical ventilation supply air systems shall utilise 100% filtered outside air to the minimum circulation rates as required by local authorities or to limit temperature rise in each ventilated space to a maximum of 5°C above ambient.

#### **5.8.11 Air Filters**

All air conditioning and mechanical ventilation supply air systems should incorporate dry media type air filters. Minimum standards of air filtration should be EU5 to Eurovent 4/5 Standard for all air conditioning and comfort air conditioning systems and EU3 to Eurovent 4/5 Standard for Mechanical ventilation supply air systems. All kitchen exhaust air systems should be fitted with grease retention air filters of a type acceptable to local authorities.

#### **5.8.12 Acoustics**

*All air conditioning and mechanical ventilation supply air systems shall be designed to maintain the following internal noise criteria with all systems operating:*

<i>Bar / Cyber Café</i>	<i>NR45</i>
<i>Circulation Spaces</i>	<i>NR45</i>
<i>Change Room/Laundry/Toilets</i>	<i>NR40</i>
<i>Dining Room</i>	<i>NR40</i>
<i>Commercial Centre</i>	<i>NR40</i>
<i>Recreation Centre</i>	<i>NR40</i>
<i>Commonwealth Family Area</i>	<i>NR35</i>
<i>Conference/Meeting Rooms</i>	<i>NR35</i>
<i>Office Facilities</i>	<i>NR30</i>
<i>Media Facilities</i>	<i>NR30</i>
<i>Residential Units</i>	<i>NR30</i>

*External noise generated by mechanical services should be designed to meet relevant environmental noise codes external to all windows of permanent residential facilities and at the site boundary.*

#### **5.8.13 System Selection**

*It is recommended that all air handling units and duct distribution systems be designed and installed to cater for the use of these Games village sites to conditioning standards.*

*Where chilled water cooling systems are proposed, the cooling coils, chilled water pipe reticulation, heating system and controls should be designed and installed to meet the above conditions. The installed capacity of the central chilled water system, however should be limited to that required for the expected weather conditions for the period of the Commonwealth Games. Provide space and all necessary valve and pipe connections for future installation of temporary or permanent additional chiller capacity to cater for the total system demand for operation in peak summer conditions.*

#### **5.8.14 Air Handling Units**

*Air handling units serving comfort conditioned areas shall be designed to cater for the highly variable population densities and provide individual temperature and dehumidification control to these areas. It is recommended that the selection of equipment for residential and recreational areas be of the higher institutional quality construction to be better able to cater for the 24 hour / 7 day/ week operation required for these areas.*

#### **5.8.15 Building Monitoring and Control System (BMCS)**

*All major mechanical services systems shall be monitored and controlled by a direct digital building management control system (BMCS) utilising multiple DDC controllers communicating to a central operator console. The DDC controllers should be capable of stand-alone operation. The BMCS shall perform all control, monitoring and alarms for mechanical services and be interfaced with other services such hot water systems, security and electrical systems.”*

The “Venue Brief” can also be downloaded from the DDA website [www.dda.org](http://www.dda.org).

**Additional Specification for Dining Area (Main Dining, Casual Dining and Bar in International Zone)**

- Flooring & floor covering will require prior approval from OC/ master caterer before final order.
- Extra layer of 8mm plywood is recommended by OC / master caterer in kitchen area for stability, strength & smooth finish.
- Areas that serve food shall have lighting systems with anti bulb shatter protection & will require prior approval from OC/ master caterer before final order.
- Illumination levels required inside the dining area structure are:
  - Kitchen / Cooking area                      500 lux
  - Offices / Corridors                              400 lux
  - Wash up areas                                   400 lux
  - Cool room, Freezer, Storage                300 lux
  - Dining    250 lux
  - Toilet     200 lux
- Drawings interior elevations will have to be submitted to OC / master caterer for design of "look & Image"
- For fresh water supply the pressure rating is specified between 3 bar & 6 bar.
- Provision of electrical supply to have voltage fluctuation protection, to avoid damage to air-conditioning & refrigeration plant.
- Make up air inside kitchen will have to be provided as OC / master caterer will provide exhaust only.

**Specification/ Bill of Quantity of Temporary Structures in Commonwealth Games Village, New Delhi, India - June to October 2010**

Sno	Description	Structure	Roofing	Walling outside	Walling inside	Internal Partition	Flooring	False Ceiling
1	Operational Zone 1	Type C, Aluminium Frame 20m span module with height at end approx. 4m as per technical specifications.	White color tensile fabric as per technical specifications.	Insulated solid panels with adequate doors & windows as per technical specifications.	same as outside	Type 2 Rigid Internal Partitions to be of appropriate material, Type 3 for store areas as per drawings and technical specifications.	Type 1 Fresh carpet in office areas, appropriate waterproof hard stand areas for warehousing & proper ground protection for container yard as per technical specifications.	NO
2	Operational Zone 2	Type C, Aluminium Frame 30m span module with height at end approx. 4m as per technical specifications.	White color tensile fabric as per technical specifications.	Insulated solid panels with adequate doors & windows as per technical specifications.	same as outside	Type 2 Rigid Internal Partitions to be of appropriate material, Type 3 for store areas as per drawings and technical specifications.	Type 1 Fresh carpet in office areas, appropriate waterproof hard stand areas for warehousing & proper ground protection for container yard as per technical specifications.	NO
3	Main Dining Hall	Type B, Aluminium Frame 40/30/15m span module with height at end approx. 4m, Hanger Type Structures as per technical specifications.	White color tensile fabric as per technical specifications.	Aluminium frame (or spider fitting) curtain glazing with doors on front side & Insulated solid panels with adequate doors & windows on the other sides as per technical specifications.	Athlete dining hall to have clip on panel system with fabric or plastic lining as per technical specifications. Workforce dining, kitchen to be same as outside.	Type 1 Rigid Internal Partitions same as the inside walling as per drawings and technical specifications. Kitchen partitions to be done by catering contractor.	Cassette flooring system with type 2 fresh carpet tiles in dining areas areas & Type 3 vinyl in circulation or kitchen areas as per technical specifications. Proper ground protection for load zone & container yard. Extra layer of 8mm plywood to be provided in kitchen area	NO
4	Main Dining Hall (Outdoor Dining) Non Air-Conditioned	Type B', Aluminium Frame 10m span module with height at end approx. 4m, Hanger Type Structures as per technical specifications.	White color tensile fabric as per technical specifications.	Open from sides.	NIL	Type 1 Rigid Internal Partitions same as the inside walling as per drawings and technical specifications.	Cassette flooring system with type 2 fresh carpet tiles in dining areas areas & Type 3 vinyl in circulation or kitchen areas as per technical specifications.	NO
5	International Zone	Type A, Aluminium Frame 15m curve span module with height at end min. 3m as per technical specifications.	White color tensile fabric as per technical specifications.	Aluminium frame (or spider fitting) curtain glazing with doors on front side & solid panels with adequate doors & windows on the other sides as per technical specifications.	clip on panel system with fabric or plastic lining as per technical specifications.	Type 1 Rigid Internal Partitions same as the inside walling as per drawings and technical specifications.	Cassette flooring system with Type 1 fresh carpet in functional areas & vinyl in circulation areas as per technical specifications. Proper ground protection for container yard. VIP lounge, Bar area to have Type 4 flooring.	Type 1 Fabric lining can be proposed in VIP lounge, BAR areas with approval from organising committee
6	Transport Mall (Accreditation Centre)	Type A, Aluminium Frame 15m curve span module with height at end min. 3m as per technical specifications.	White color tensile fabric as per technical specifications.	Aluminium frame (or spider fitting) curtain glazing with doors on front side & solid panels with adequate doors & windows on the other sides as per technical specifications.	Accreditation center to have clip on panel system with fabric or plastic lining as per technical specifications. Rest of the areas to be same as outside.	Type 1 Rigid Internal Partitions same as the inside walling as per drawings and technical specifications.	Cassette flooring system with Type 1 fresh carpet in accreditation center as per technical specifications.	Type 1 Fabric lining can be proposed in accreditation center with approval from organising committee
7	Transport Mall (Concourse Area) Non Air-Conditioned	Type A', Aluminium Frame 10m curve span module with height at end min. 3m as per technical specifications.	White color tensile fabric as per technical specifications.	Aluminium frame (or spider fitting) curtain glazing with doors on front side & solid panels with adequate doors & windows on the other sides as per technical specifications.	Same as outside.	Type 1 Rigid Internal Partitions same as the inside walling as per drawings and technical specifications.	Appropriate waterproof hard stand areas for concourse areas with minimum height of 200mm from road level.	No
8	Resident Centers	Type E structure, Internal Partitioning inside residential zone	NA	Rigid walling as per drawings and technical specifications.	Rigid walling with clip on panel system with fabric or plastic lining as per drawings and technical specifications.	Type 1 Rigid Internal Partitions same as the inside walling as per drawings and technical specifications.	Type 1 Fresh carpet as per technical specifications.	Type 2 False ceiling tiles as per technical specification.
9	Polyclinic & Dope Control Center	Type E structure, Internal Partitioning inside residential zone	NA	Rigid walling as per drawings and technical specifications.	Rigid walling as per drawings and technical specifications.	Type 1 Rigid Internal Partitions as per drawings and technical specifications.	Type 1 Fresh carpet in office areas, type 3 vinyl flooring in rest of the areas as per technical specifications.	Type 2 False ceiling tiles as per technical specification.
10	Casual Dining	Type E structure, Internal Partitioning inside residential zone	NA	Rigid walling as per drawings and technical specifications.	Rigid walling as per drawings and technical specifications.	Type 1 Rigid Internal Partitions as per drawings and technical specifications.	Type 2 Fresh carpet tiles in dining areas areas & Type 3 vinyl in circulation or kitchen areas as per technical specifications. Proper ground protection for load zone & container yard.	Type 2 False ceiling tiles as per technical specification.
11	Sports Information Center	Type E structure, Internal Partitioning inside residential zone & Type B temporary marquee structure	NA	Rigid walling as per drawings and technical specifications.	Rigid walling as per drawings and technical specifications.	Type 2 Rigid Internal Partitions as per drawings and technical specifications.	Type 1 Fresh carpet as per technical specifications.	Type 2 False ceiling tiles as per technical specification only inside permanent structure.

Sno	Description	Structure	Roofing	Walling outside	Walling inside	Internal Partition	Flooring	False Ceiling
12	CGA Services Center	Type E structure, Internal Partitioning inside residential zone	NA	Rigid walling as per drawings and technical specifications.	Rigid walling as per drawings and technical specifications.	Type 2 Rigid Internal Partitions as per drawings and technical specifications.	Type 1 Fresh carpet as per technical specifications.	Type 2 False ceiling tiles as per technical specification.
13	Religious Center	Type B, Aluminium Frame 15/20m span module with height at end 3m as per technical specifications.	White color tensile fabric as per technical specifications.	Aluminium frame (or spider fitting) curtain glazing with doors on front side & Insulated solid panels with adequate doors & windows on the other sides as per technical specifications.	Prayer hall to have clip on panel system with fabric or plastic lining as per technical specifications. Workforce dining, kitchen to be same as outside.	Type 1 Rigid Internal Partitions same as the inside walling as per drawings and technical specifications. Kitchen partitions to be done by catering contractor.	Type 1 Fresh carpet as per technical specifications.	NO
14	Venue Accreditation Help Office (VAHO)	Type D structure, Aluminium Frame 5/10/15m span module with height at end 3m as per technical specifications.	White color tensile fabric as per technical specifications.	Insulated solid panels with adequate doors & windows as per technical specifications.	same as outside	Type 3 Rigid Internal Partitions to be of appropriate material or same as the inside walling as per drawings and technical specifications.	Type 1 carpet in office areas with appropriate flooring as per technical specifications.	NO
15	Drivers Lounge	Type D structure, Aluminium Frame 10/5/3m span module with height at end 3m as per technical specifications.	White color tensile fabric as per technical specifications.	Fabric panels with adequate doors & windows as per technical specifications.	same as outside	Type 3 Rigid Internal Partitions to be of appropriate material as per drawings and technical specifications.	Type 1 Fresh carpet in office areas with basic appropriate flooring as per technical specifications.	NO
16	Pop up Kiosks	Type F structure, Aluminium Frame 3m span module with height at end 3m as per technical specifications.	White color tensile fabric as per technical specifications.	Insulated solid panels with adequate doors & windows as per technical specifications.	same as outside	NA	N.A.	NO
17	Police Posts	Type F structure, Aluminium Frame 10/5/3m span module with height at end 3m as per technical specifications.	White color tensile fabric as per technical specifications.	Fabric panels with adequate doors & windows as per technical specifications.	same as outside	Type 3 Rigid Internal Partitions to be of appropriate material as per drawings and technical specifications.	Type 1 carpet in office areas with basic appropriate flooring as per technical specifications.	NO



**Name of Work:** Construction of Commonwealth Games Village for Commonwealth Games Delhi 2010 near Akshardham Temple Off Road NH-24, New Delhi, INDIA.

**Sub Head:** Supply and Installation of Temporary Structure on Rental Basis at Commonwealth Games Village.

S.No.	Temporary Structure	Unit	Quantity	Rate (INR)	Total (INR)
<b>1</b>	<b>Operational Zone 1</b>				
1.1	Type C structure as per specifications	Sqm	1050		
<b>2</b>	<b>Operational Zone 2</b>				
2.1	Type C structure as per specifications	Sqm	10800		
<b>3</b>	<b>Main Dining Hall</b>				
3.1	Type B structure as per specifications ( enclosed space complete with services)	Sqm	7450		
3.2	Type B' structure as per specifications (outdoor dining with roof & no A/C, side walls)	Sqm	1200		
<b>4</b>	<b>International Zone</b>				
4.1	Type A structure as per specifications	Sqm	5850		
<b>5</b>	<b>Transport Mall</b>				
5.1	Type A structure as per specifications	Sqm	1400		
5.2	Type A' structure as per specification	Sqm	3400		
<b>6</b>	<b>Resident Centers</b>				
6.1	Type E structure as per specifications	Sqm	6580		
<b>7</b>	<b>Polyclinic &amp; Dope Control Center</b>				
7.1	Type E structure as per specifications	Sqm	1090		
<b>8</b>	<b>Casual Dining</b>				
8.1	Type E structure as per specifications	Sqm	575		
<b>9</b>	<b>Sports Information Center</b>				
9.1	Type E structure as per specifications	Sqm	135		
9.2	Type B structure as per specifications	Sqm	225		
<b>10</b>	<b>CGA Services Center</b>				
10.1	Type E structure as per specifications	Sqm	335		
<b>11</b>	<b>Religious Center</b>				
11.1	Type B structure as per specifications	Sqm	225		
<b>12</b>	<b>Venue Accreditation Help Office (VAHO)</b>				
12.1	Type D structure as per specifications	Sqm	232		
<b>13</b>	<b>Drivers lounge</b>				
13.1	Type D structure as per specifications including toilets	Sqm	450		

S.No.	Temporary Structure	Unit	Quantity	Rate (INR)	Total (INR)
<b>14</b>	<b>Pop up Kiosks</b>				
14.1	Type F structure as per specifications	Sqm	216		
<b>15</b>	<b>Police Posts</b>				
15.1	Type F structure as per specifications including toilets	Sqm	45		
<b>16</b>	<b>Acoustic Partition in Training Hall</b>				
16.1	Acoustical Partition in Training Hall as per Technical specification in the document	Sqm	540		
<b>17</b>	<b>Police Watch Towers</b>				
17.1	Police watch towers along boundary wall as per technical specification in the document	Sqm	100		
<b>18</b>	<b>Security Fence</b>				
18.1	Security Fence as per technical specification along the perimeter or as directed by the engineer in-charge	Mtr.	1700		
<b>19</b>	<b>Toilets</b>				
19.1	Female toilet as per specification	Nos.	22		
19.2	Male toilet as per specification	Nos.	27		
19.3	Dissabled (Parasports) toilets as per specification	Nos.	27		
19.4	Common toilets single unit as per similar specification (as above)	Nos.	10		
<b>20</b>	<b>Hardstanding/ Paved area</b>				
20.1	Hardstanding/ paved areas as specified in the document & drawings	Sqm	7395		
<b>21</b>	<b>Bund Road Lighting</b>				
21.1	Illuminating of both side slope of Bund Road with 30m lux level. Width of embankment 8.40m (each side)	Mtr.	2100		

S.No.	Temporary Structure	Unit	Quantity	Rate (INR)	Total (INR)	Vendor is to Quote Rate
<b>22</b>	<b>Sauna</b>					
i).	Providing, Fixing, Testing and Commissioning Sauna cabin assembled from pre-fabricated panel elements of Finish spruce. Door with bronze window set with handles and lock. Benches and head rest made of Abachi tree. Sauna heater with guard rail. Sauna light with shade of Abachi. Ventilation and air renovation holes. Heather protection fence. Exterior Digital Control installed. Control of light temperature, time of operation and delayed start time. Protection IP-34 Heater Kw - 6 No. of benches: 2. Make: Astral / Certikin UK / Viking USA Model : 34000 Seating: 4 Laying: 2 Size : 2m x 1.5m x 2.1m / 2.11 x 1.6 x 2.0	Set	2			
ii).	Providing, Fixing, Testing and Commissioning Sauna Box consisting Wooden Bucket with Ladle, Sand Timer, Thermometer, Hygrometer, Sauna Fragrance 50 ml (2 pieces) Make: Astral / Certikin UK / Viking USA.	Set	2			
<b>23</b>	<b>Steam</b>					
i).	Providing, Fixing, Testing and Commissioning Steam generation and Control Equipment 9 KW. Make: Astral / Certikin UK / Viking USA / Equivalent Model	Set	2			
ii).	Providing, Fixing, Testing and Commissioning Door for Steam Room size 2.1 x 1.7m. Make: Astral / Certikin UK / Viking USA.	Set	2			
iii).	Providing, Fixing, Testing and Commissioning Steam Ceiling. This would be fabricated at the site with Aluminium Composite Panel (ACP) using Aluminium Channel fittings at the back side. Necessary sealing shall be done with silicone to prevent the moisture loss.	Set	2			
iv).	Providing, Fixing, Testing and Commissioning Steam Light. Two Nos. steam lights (24V) with low voltage isolator.	Set	2			
v).	Providing, Fixing, Testing and Commissioning Steam Installation Accessories. Steam accessories for installation like water feed hose, drain hose and steam hose.	Set	2			

S.No.	Temporary Structure	Unit	Quantity	Rate (INR)	Total (INR)	Vendor is to Quote Rate
vi).	Providing, Fixing, Testing and Commissioning Electrical work. Main Electrical Supply will be provided by client alongwith MCB in the plant room. Rest of the necessary electrical work including conduiting, wiring with all necessary fittings in between the MCB, Steam Generator, Control Panel, Sensor and Steam Lights shall be done by us.	Set	2			
vii).	Providing, Fixing, Testing and Commissioning Plumbing work. Pressurized Soft water supply line with Ball Valve will be provided by the client in the Plant Room. Rest of the necessary plumbing work including Insulated GI piping from plant room to Steam Room with necessary fittings such as Ball Valves, etc. shall be done.	Set	2			

#### 24 Jacuzzi

- |      |   |     |   |
|------|---|-----|---|
| i).  | Providing, Fixing, Testing and Commissioning Readymade Spa fully fitted with pipework, skimmer, main drain and filtration, hydro massage and air blower nozzles. Hydro massage or digital control press buttons and two venturi inlets. Supplied with adjustable bracket for easy installation. Model: Coral-Ivory Colour / Seating Capacity : 4 Make: Astral / Certikin UK / Viking USA . Equivalent.            | Set | 2 |
| ii). | Providing, Fixing, Testing and Commissioning Kit Compact Cronos - Compact Kit filtration is supplied with Cantabric 500mm dia filter, filtration pump, massage pump, air blower, electric heater and monophase control electric box including main switch and circuit controls for operating heating, filtration and massage, pneumatic control and programming clock. Make : Astral / Certiking UK . Viking USA. | Set | 2 |

#### 25 Chilled Shower System

Supply, Istallation, Testing and Commissioning of the Chilled Shower System including the following specifications and details:

S.No.	Temporary Structure	Unit	Quantity	Rate (INR)	Total (INR)	Vendor is to Quote Rate
4 (i).	Providing, Fixing, Testing and Commissioning a Chilling Unit of 150 ltrs. Per hour chilling capacity and 150 ltrs. Chilled water storage with complete inner and outer body made from stainless steel duly insulated alongwith automatic temperature control and a digital display and one no. 1 1/2 Ton Compressor of Kirloskar make.  This system is supplied with a Hydropneumatic Pressure System comprising a 0.5 hp Pump (Sarvo make or equivalent) and 19 ltrs. Imported Pressure Tank, Pressure Switch / Gauge from Varem S.r.I Italy or equivalent.	Set	2			
4 (ii).	Electrical work: Providing, Fixing, Testing and Commissioning Main Electrical Supply will be provided by client in the plant room. Rest of the necessary electrical work in the plant room shall be done.	Set	2			
4 (iii).	Plumbing Work: Providing, Fixing, Testing and Commissioning Main Feed water supply line with Ball Valve will be provided by the client in the Plant Room. Insulated GI piping from plant room to Shower Room with necessary fittings such as Ball Valves, etc. shall be done. Cost of Shower Head and Diverter / Mixer not included and will be provided by the client.	Set	2			

## 26 Water Softening Equipments

- 5 Water Softening System for the Steam Generator (for Male & Female Section).

Supply, Installation, Testing and Commissioning of Water Softening System including the following specifications and detail.

- 5 (i). Providing, Fixing, Testing and Commissioning Water Softening System comprising of a Water Softener (Assumed Raw Water Hardness : 300 mg / I & T.D.S < 400 mg / I) of 0.5 cum / ltrs (max..) for Steam Generator alongwith Hydropneumatic Pressure System comprising a 0.5 hp Pump (sarvo make or equivalent) and 19 ltrs. Pressure Tank / Pressure Switch / Gauge from Varem S.r.I., Italy or equivalent and a 500 ltrs. Storage Tank for treated water with allied fittings in between the system.

Set 1

**Tender Document of  
Temporary Structure**

S.No.	Temporary Structure	Unit	Quantity	Rate (INR)	Total (INR)	Vendor is to Quote Rate
5 (ii).	Electrical Work: Providing,, Fixing, Testing and Commissioning Main Electrical Supply will be provided by client in the plant room. Rest of the necessary electrical work with all necessary fittings in between shall be done by us.	Set	1			
5 (iii).	Plumbing Work: Providing, Fixing, Testing and Commissioning Necessary plumbing work including GI / PVC piping in bwtween the main feed water supply line, softening syste, sotrage tank, hydropneumatic system and steam generators in the plant room with necessary fittings such as Ball Valves, etc shall be done by us.	Set	1			

**27 Change Room**

Change room of adequate size with lockers. Set 1

**Note 1:** The temporary structure rates shall be inclusive of all external / internal walls, windows,

**Note 2:** The above items include design, supply, deliver, install, commission, maintain, decomission and