E-TENDER DOCUMENT

For

Work of Landscape and Horticulture at Science Centre (Category-II) at Jorbeer Residential Scheme, Block C, Rajasthan-334001.

TENDER INVITING AUTHORITY

Birla Industrial & Technological Museum (A unit of National Council of Science Museums)

19A,Gurusaday Road, Kolkata – 700019



INSTRUCTIONS TO THE CONTRACTORS/BIDDERS FOR THE E-SUBMISSION OF THE BIDS ONLINE THROUGH TENDER SITE

https://eprocure.gov.in/eprocure/app

This tender document has been published on the Central Public Procurement Portal (URL: https://eprocure.gov.in/eprocure/app). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: https://eprocure.gov.in/eprocure/app).

REGISTRATION

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: https://eprocure.gov.in/eprocure/app) by clicking on the link "Click here to Enroll" on the CPP Portal. Enrolment is free of Charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC"s to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters These parameters could include organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Portal.
- Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective "My Tenders" folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

- Bidder should take into account any corrigendum published on the tender document before submitting their bids. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents including the names and content of each of the document that need to be submitted.
- 2) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
- To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders Bidders can use "My Space" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as "offline" to pay the Tender Fee & EMD and enter details of DD/any other accepted instrument.
- 4) Bidder should prepare the TENDER FEE & EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the Tender Processing Section, latest by the last date and time of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the
- 5) Scanned copy and the data entered during bid submission time otherwise the Tender will be summarily rejected.
- The Tender Inviting Authority (TIA) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders The bidder should see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is liable to be rejected
- Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. The price bid has been given as a standard BoQ format (BoQ_xxxx.xls) with the tender document, then the same is to be downloaded and to be filled by all the bidders Bidders are required to download the BoQ file, open it and complete the green colored [unprotected] cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected. In e-Tendering, intending bidder can quote his rate in figures only. The rate in words, amount of each item and total is generated automatically. Therefore, the rate quoted by the bidder in figures shall be taken as correct. The Comparative Statement is also generated automatically. The Comparative statement and rate quoted by each bidder shall be downloaded. The manual calculation check of bids and comparative statement shall be final. In case, any discrepancy is noticed, the decision of appropriate BITM authority shall be final and binding.
- 8) The server time (which is displayed on the bidders" dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission. The bidders are requested to submit the bids through online e-tendering system to the **Tender Inviting Authority (TIA)** well before the bid submission end date & time (as per Server System Clock).
- All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized person until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done.
- 10) The uploaded tender documents become readable only after the tender opening by the authorized bid openers
- 11) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 12) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

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ASSISTANCE TO BIDDERS

- Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority(TIA), Birla Industrial & Technological Museum, 19 A Gurusaday Road, Kolkata:700019 or may call us on Mob:- 9477345291, 9477345292 or Email at.: director@bitm.gov.in.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is **1800-3070-2232**.

NOTICE INVITING TENDER (ONLINE)

Ref. No. BM-49 (7) /W/Bikaner/2025

Dated 08.04.2025

- 1. The **Birla Industrial & Technological Museum** is a constituent unit under the National Council of Science Museums, Kolkata* (*hereinafter referred to as the Museum/Centre).
- 2. Online e-tender (Percentage Rate Bid) are hereby invited from reputed and experienced Engineering/Technical contractors capable of carrying out the work of "Work of Landscape and Horticulture at Science Centre (Category-II) at Jorbeer Residential Scheme, Block C, Rajasthan-334001" with excellent finishing quality. Documents are to be submitted online to the Central Public Procurement Portal website https://eprocure.gov.in/eprocure/app, before the prescribed date & time, using the valid Digital Signature certificate (DSC) obtained from the authorized agencies of NIC & valid GST registration no.
- 3. The work primarily involves **Landscape and Horticulture** and comprises of civil works such as Earth work, Clearing of Jungle etc. (refer tender drawings & BOQ)
- 4. The place of work would be at: Jorbeer Residential Scheme, Block- C, Bikaner, Rajasthan, PIN-334001.

Important Information & Dates:

	Bengal.		
Authority	19A, Gurusaday Road, Kolkata-700019, West		
Address of Tender Inviting	Birla Industrial & Technological Museum,		
Bid Opening (Technical) Date	April 29, 2025 (As per portal time)		
Bid submission End Date	April 28, 2025 (As per portal time)		
Pre-Bid Meeting date	N.A.		
Bid submission Start Date	April 09, 2025 (As per portal time)		
Bid Document Download End Date	April 28, 2025 (As per portal time)		
Bid Document Download Start Date	April 08, 2025 (As per portal time)		
Bid Document Published Date	April 08, 2025 (As per portal time)		
Period of completion	120 (One Hundred and Twenty) Days		
EMD	Rs.33,900/-		
Estimated cost of work	Rs.13,54,793/- (including GST & LWC)		

5. Time for carrying out the work will be 120 (One Hundred and Twenty) Days from the date of issue of Award of Contract (AoC).

6. **ELIGIBILITY CRITERIA:**

The agency must fulfil the criteria mentioned below and submit the documents in support of the following:

6.1 Financial: -

6.1.1 Average Annual Financial Turnover on Horticulture work should be at least 30% of the estimated cost put to tender during the immediate last three consecutive financial years.

6.2 Technical (For Horticulture):-

- Registration/Empanelment with other Govt. Departments/Agencies, if any. Please provide proof of registration / empanelment.
- 6.2.2 The agency should have experience of having successfully executed **similar works** with Central / State Govt. Departments, PSUs, Autonomous Bodies, Reputed Private Sector (BSE /NSE listed), **during the last 07 (seven) years** ending previous day of last date of submission of tenders: -

3(three) similar completed works (at least one of them should be in Central Government / Central Autonomous Bodies/ State PWD/ Central Public Sector Undertakings), Reputed Private Sector (BSE /NSE listed) each costing not less than 40% of estimated cost.

OR

2(two) similar completed works (at least one of them should be in Central Government / Central Autonomous Bodies/ State PWD / Central Public Sector Undertakings), Reputed Private Sector (BSE /NSE listed) each costing not less than 60% of the estimated cost.

OR

1(one) similar completed works (at least one of them should be in Central Government / Central Autonomous Bodies/ State PWD / Central Public Sector Undertakings), Reputed Private Sector (BSE /NSE listed) of aggregate cost not less than 80% of the estimated cost.

- 7. The intending bidder must read the terms and conditions of BITM carefully. He should only submit his bid if he considers himself eligible and if he is in possession of all the documents required.
- 8. Information and Instructions for bidders posted on website shall form part of bid document.
- 9. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from https://eprocure.gov.in/eprocure/app free of cost.
- 10. Online bid documents submitted by intending bidders shall be opened only of those bidders, who has deposited e-Tender and Earnest Money Deposit and other documents scanned and uploaded are found in order.
- 11. Those contractors not registered on the website mentioned above, are required to get themselves registered beforehand.
- 12. The intending bidder must have valid Class II or Class III Certificates with signing key usage (DSC) to submit the bid.
- 13. The e-Tenders invited under two envelopes system, the first electronic envelope will be named as Technical Envelope & will contain documents of bidder's satisfying the Page 5 of 44

eligibility conditions and 2nd electronic envelope will be named as Financial Envelope containing Rate Quote Sheet. The bidder shall submit **TECHNICAL BID ENVELOPE** & **FINANCIAL BID ENVELOPE** simultaneously. **The technical bids will be evaluated first and thereafter financial bids of eligible bidders only shall be opened.** These envelopes shall contain one set of the following documents: -

a) TECHNICAL BID ENVELOPE shall contain the following documents in pdf. format:

i) Scanned copy of Demand Draft / Pay order or Banker's Cheque of any Nationalised / Scheduled Bank /Insurance Surety Bonds/Fixed Deposit Receipt/ Bank Guarantee from any of the Commercial Bank/ Online payment transfer receipt towards Earnest Money Deposit (EMD) @ 2.5% of the tender value in pdf format in favour of National Council of Science Museums payable at Kolkata. Details of Bank account is as under:

Name of the Account Holder	Birla Industrial and Technological Museum		
Account No.	10513451673		
IFSC Code	SBIN0001749		
Branch	Syed Amir Ali Avenue, Park Circus, Kolkata-700017		
Bank Name	State Bank of India		

- ii) Scanned copy of Enlistment Order/Registration certificate with appropriate Authority as applicable in pdf. format, if any.
- iii) Scanned copies of WORK EXPERIENCE CERTIFICATES / COMPLETION CERTIFICATE issued by Govt./ Semi-Govt./ Autonomous/ PSUs and/or Reputed Institution of requisite magnitude with appropriate Authority as per NIT in .pdf format and scanned copies of GST registration and PAN Card, ESI, EPF, and license for engagement of labourers from appropriate authority etc. in .pdf format.
- iv) Scanned copy of **UNDERTAKING** (as per Annexure "A") duly signed with company seal in .pdf format which also includes the undertaking that "The physical EMD (except in case of online payment of EMD) shall be deposited by me/us with the office of NCSM calling the bid before the bid opening date otherwise the department may reject the tender/bid and also take action to withdraw my/our enlistment/debar me/us from further tendering in NCSM or any of its constituent units."
- v) Duly filled prequalification format as per **Annexure "B" & "C"** with supporting document in pdf format. Affidavit as per **Annexure "D"** in pdf. format
- vi) Tender Document in pdf. format (TENDERXXXXX.pdf file) digitally signed.
- vii) Relevant document for **Average Financial Turnover** on **Horticulture work** which should be at least **30**% of the value of the estimated cost put to tender during the immediate last 03 (three) consecutive financial years.

b) **FINANCIAL BID ENVELOPE** shall contain:

- (i) Rate Quote Sheet (Percentage basis) in .xls format.
- 14. It may be noted that the Technical Bid Envelope which are not found in order will be rejected.

- 15. Tenders which do not fulfil any of the above conditions or are incomplete in any respect are liable for summary rejection.
- 16. The Museum/Centre does not bind itself to accept the lowest e-tender and reserves to itself the authority to reject or partially accept any or all the e-tenders, e-tendered items or schedules received without assigning any reason whatsoever.
- 17. Canvassing in connection with e-tenders is strictly prohibited and the e-tenders submitted by the e-tenderers who resort to canvassing will be liable for rejection on that ground alone.
- 18. All taxes including GST, labour cess, duties, etc. on materials freight & transit Insurance F.O.R. site in respect of this contract will be payable by the successful tenderer. Nothing extra will be payable for increase in such taxes, duties, Labour Cess, etc. even if imposed or levied either before or after the e-tenders are opened or during currency of contract.
- 19. Before submitting the e-tender, the tenderer shall examine all specifications, drawings, conditions of contract and inspect the site if necessary. The e-tender must be balanced in respect of individual items so that the rates quoted shall remain in force even if the quantities deviate before or during the execution of the work.
- 20. The successful e-tenderer selected for the work shall deposit requisite performance security/Guarantee for the total tenure of the contract covering the MAINTENANCE period and subsequently sign the formal agreement in non-judicial stamp paper of appropriate value within 15 days from the date of issue of Letter of Intent (LoI) to them by the Museum/Centre failing which the LOI for award of work is liable to be cancelled and EMD forfeited.
- 21. On completing the signing of agreement and other formalities, the selected e-tenderer will be issued an **Award of Contract (AoC)** by the Museum/Centre and given 15 days mobilisation time which shall be counted from the date of issue of the **AoC**. Within the mobilisation time the tenderer must scrutinise all the tender drawings, CPM/PERT/BAR CHART, specifications, etc. as applicable and obtain clarifications from the Architect wherever necessary and submit a BAR CHART to the Museum/Centre. During the mobilisation time, the tenderer shall also mobilise all his resources including men and materials, obtain the supply of water and electricity necessary for **Horticulture work**, erect a temporary office/go-down at site. **The date of commencement of work shall be the date of issue of AoC**.
- 22. The validity period of the e-tender shall be **at least 180 days** from the date of opening of e-tenders. This period may be extended with mutual consent if the decision regarding issue of Letter of Intent is delayed for any reason.
- 23. In case EMD is submitted in the form of Bank Guarantee, the validity of the same should be at least 45 days beyond the bid validity period.

Appendix to NIT

1. SUMMARY CONDITIONS OF CONTRACT

Maintenance Period : One year from the area is handed over in

whole i.e. after virtual completion of work as

certified by the Museum/Centre.

Time for Completion : 120 (One Hundred and Twenty) Days

from the date of AoC as per NIT Clause 5

read with NIT Clause 21.

Minimum value of work for :

Interim Payment.

20 % of the tendered value or less at the discretion of the Museum/Centre but not more than one running bill in a month.

Earnest Money to be deposited

with the tender

Rs. 33,900/- (being 2.5% of the estimated value of tender, rounded off to nearest

thousand).

Liquidated damages for non-: completion of work in time (Clause 39d of the general conditions of contract).

Liquidated damages for : insufficient progress of work (Clause 39c of the general

One percent per week of the total cost of the work awarded subject to a maximum of 10% of gross value of work done or cost of the work awarded whichever is greater.

Half percent per week of the total cost of the work awarded subject to a maximum of 10% of gross value of work done or cost of the work awarded whichever is greater.

2. RETENTION MONEY FOR INTERIM PAYMENT

: Total:- 10% as per the following detail

i) Performance Security/Guarantee

conditions of Contract).

3% of tendered value (After adjusting EMD deposited with tender) to be deposited on issue of LoI before signing of agreement through Demand Draft/Banker's cheque/ Bank Guarantee from any of the Commercial Bank/ online bank transfer/ Insurance Surety bonds/ fixed deposit receipt issued by nationalized / scheduled bank to be drawn or duly pledged as the case be, in favour of the Birla Industrial and Technological Museum, payable at Kolkata.

ii) Security deposit

7 % of the value of work done to be recovered from R.A. Bills so as to make up 10% of gross value of work done including Performance Guarantee.

Period of submitting final bill by the successful etenderer : 3 months from the date of virtual

completion.

FORMAT FOR BANK GUARANTEE BOND (For EMD only)

1.	In consideration of the (Name and address of the Museum/Centre) hereinafter called the
	Museum/Centre having stipulated under clause 10 of the Notice Inviting E-tender No for
	the work of (mention name of work as in NIT) at the aforesaid site agreed to accept payment of Earnest
	Money for due fulfilment of the terms and conditions contained in the said NIT (including appendix) for
	participation in the e-tender from (Name and address of the prospective e-tenderer) (hereinafter called
	the prospective e-tenderer) by production of a bank guarantee of (Mention amount of EMD in figure &
	words) only, we (Name and address of Bank furnishing guarantee (Br. Code) (hereinafter
	referred to as "The Bank") do hereby undertake to pay to the Museum/Centre an amount not exceeding
	(mention EMD amount in figure & Words) only against any loss or damage caused to or suffered or
	would be caused to or suffered by the Museum/Centre by reasons of any breach by the said
	prospective e-tenderer of any of the terms or conditions contained in the said NIT (including appendix)
	relating to participation in the e-tender.

- We, (Name of Bank), do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Museum/Centre stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Museum/Centre under National Council of Science Museums by reasons of any breach by the said prospective etenderer of any of the terms or conditions contained in the said NIT (including appendix) or by reason of the prospective e-tenderer's failure to comply with conditions contained in the said NIT relating to participation in the e-tender. 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 (mention amount of EMD in figures and words) only.
- 3. We, (Name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period as mentioned in Clauses 20 and 21 of the said NIT (including appendix) or/and the period stipulated under clause 22 and 23 for deciding the e-tender and that it shall continue to be enforceable till the dues of the Museum/Centre under or by virtue of the said NIT (including appendix) have been fully paid and its claims satisfied or discharged or the Museum/Centre certified that the terms and conditions of the said NIT (including appendix) have been fully and properly honoured and carried out by the said prospective e-tenderer for participation in the e-tender and accordingly discharges the guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the periods stipulated above, we shall be discharged from all liability under this guarantee thereafter.
- 4. We, (Name of the Bank) further agree with the Museum/Centre that they shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to extend time of deciding the e-tender as may be expedient and to forbear or enforce any of the terms and conditions relating to the NIT (including appendix) and we shall not be relieved from our liability by reason of any such extension being granted to the said proposed e-tenderer for any forbearance, or act of omission on the part of the Museum/Centre or any indulgence by the Museum/Centre to the said proposed e-tenderer or by any such matter or thing whatsoever which under the law relating to surety.
- 5. We, (Name of the Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Museum/Centre in writing.

Dated, the	day of
	For

(Authorised signatory of the Bank with Sea

FORMAT FOR BANK GUARANTEE BOND *

(For Performance guarantee /Retention Money/Security Deposit only)

1. In consideration of the		
Museum/Centre") having agreed to exempt		r called "The
(Hereinafter called the "successful e-tenderer' from the tender No	datedMade between t	and/or the terms and the Museum/Centre and
Performance guarantee /Earnest Money/Retention Mor the terms and conditions contained in the said NIT or the on production of a bank guarantee	ney for the due fulfilment by e conditions of (execution of	the said Contract(s) of work) or the agreement
		only), We
to pay to the Museum/Centre an amount not exceeding any loss or damage caused to or suffered or would be reasons of any breach by the said successful e-tendere said NIT, the conditions of Contract or the Agreement.	Rse caused to or suffered by er of any of the terms or con	the Museum/Centre by ditions contained in the
2. We, payable under this guarantee without any demur, methat the amount claimed is due by way of loss or day the Museum/Centre under National Council of Said successful e-tenderer of any of the terms or confict or the Agreement or by reason of the conditions contained the said NIT or the condition made on the Bank shall be conclusive as regards the guarantee. However our liability under this guarantes.	erely on a demand from the amage caused to or would be amage caused to or would be acceptanced in the same successful e-tenderer's fair of contract or the Agreement of the amount due and payable	Museum/Centre stating the caused to or suffered as of any breach by the id NIT or the conditions illure to perform as perfent. Any such demand by the Bank under this
*Note: (Bank guarantee bond towards Performance g defined under clause 32 of the General Con		

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agreement on award of work acceptable only if furnished by any of the Nationalised /

Commercial Banks.)

3.	We, further agree that the
	guarantee herein contained shall remain in full force and effect during the period as mentioned in Clause 20 of the said NIT read with clause 32 of the conditions of contract, or the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till the dues of the Museum/Centre under or by virtue of the said NIT or the conditions of contract or the Agreement have been fully paid and its claims satisfied or discharged or the Museum/Centre certified that the terms and conditions of the said NIT or the conditions of contract or the Agreement have been fully and properly honoured and carried out by said successful e-tenderer and accordingly discharges the guarantee.
	Unless a demand or claim under this guarantee is made on us in writing on or before the
	We shall be discharged from all liability under this guarantee thereafter.
4.	We,
5.	We,
	Dated, the day of
	For(Authorised signatory of the Bank with seal)

FORMAT FOR LETTER OF INTENT(LOI)*

(Mention file nu			Date
Sub:	Letter of Intent for the work of		
Dear Sirs,			
With reference	to your e-tender dateddated	(ar) # it i	nd further clarification vide letter number is intended to award the aforesaid work at
	of Rs (Value based on only items of wo	············	
documents purchased Performance security se	by you while e-tendering for this	s job. For this purpose of appropriate value for p	format already printed in the e-tender, you are requested to deposit requisite reparing the contract Agreement within 15
other necessary resource		ng mobilisation period, yo	oC for mobilising your men, materials and ou are requested to study all the drawings chitect or this office immediately.
Please note that the date of issue of this Thanking you,		tract agreement the work	has to be completed within 15 days from
			Yours faithfully,

Letter of intent is to be issued in the letter head of the parent Museums/Centres and a Xerox copy is to be maintained as office copy on which signature of the authorised representative of the successful e-tenderer is to be obtained with date at the time of issue of original letter of intent. # Delete words within brackets if not applicable in specific case.

Sd/-

CoA/Dy.CoA/S.O.(Admn.)

^{*} To be issued by the Administrative officer of the parent Museum/Centre, viz, B.I.T.M, V.I.T.M., NSCM, N.S.C.D., C.R.T.L., Science City, even though the work is to be done in any RSC/SRSC/DSC.

FORMAT FOR ARTICLES OF AGREEMENT

INSTRUCTIONS (not to be typed in Agreement)

(Articles of Agreement have to be typed on non-judicial stamp paper. The value of the stamp paper varies from state to state and is to be known from the particular place. The stamp paper will be purchased by the successful e-tenderer and the agreement may be typed by the Museum/Centre according to the format.)

ARTICLES OF	AGREEM	ENT made at							
				(Place)					
	(Date)	day of		(Month & Ye					
		(Ne	ame of the p	arent Museun	 n/Centre)				
(under the Nat 1961), hereina part and	ional Cour fter referre	ncil of Science Museun ed to as the Museum/	ms, a Socie Centre whic	ty registered ι ch expression	inder the S shall includ	Societies Reg de its success	istration Ac sors and as	t of West E ssigns on tl	Bengal, ne one
		(n	ame of the	successful e-te	enderer)				
•		style of							
		(Name and co s the successful e-te ns on the other part.		ress of the suc			respective	heirs, exe	cutors,
WHEREAS	the	Museum/Centre	is	desirous	of	getting 	the	work	of
		of the work)	the	erein done and	l has caus	ed			
Notice Inviting conditions by		(Including appendix), of	contract	•	to	b	е	-	rk and epared
		(Ne	ame and ad	dress of the A					
conditions of con Bank Draft/Bank	tract have b Guarantee a	NIT (including appendix) een signed by or on beha a sum of Rupees	If of the parti	ies hereto. AND	whereas th	e Successful e-t	enderer has d	leposited in (
			(exac	t amount in words)					

the amount being 3% of tendered value (after adjusting EMD) rounded off to the nearest thousand) with the Museum Centre as Initial Security/Performance Security for the due performance of this Agreement as provided in the said conditions. In the case of Bank Guarantee, the period of Bank Guarantee referred to being valid until the MAINTENANCE period as specified in e-tender and to be revalidated to required dates as demanded by the Museum/Centre if completion date is extended.

NOW IT IS HEREBY AGREED AND DECLARED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

- 2. The Museum/Centre shall pay to the successful e-tenderer such sum as shall become payable hereunder at the time and in the manner specified in the said conditions.
- 3. Time is the essence of this agreement and the successful e-tenderer shall proceed with the work, throughout the stipulated period of this contract, strictly according to the CPM/PERT/BAR CHART as attached with the tender or as submitted by the successful tenderer herewith and forming a part of this agreement. At any stage during execution, if any work lags behind the target as indicated in the CPM/PERT/BAR CHART for reasons directly attributable to the successful e-tenderer, he shall pay or allow the Museum/Centre to deduct from any money due to him a liquidated damage as per Clause 39 of the conditions of contract.
- 4. This agreement comprises the work above and all subsidiary works connected therewith, even though such works may not be shown on the drawings, or described in the said specifications or the priced Schedule of Quantities.
- 5. The Museum/Centre through the Engineer (As defined under clause 2 of General conditions of contract) reserves to itself the right of altering the drawings and of adding to or omitting any item of work or of having portions of the same carried out departmentally or otherwise and such alterations or variations shall not vitiate this agreement.
- 6. All disputes and differences of any kind whatever except as excluded under Clause 2 of General Conditions of contract appended herewith, arising out of or in connection with the contract on the carrying out of works (Whether during the progress of the work or after their completion and whether before or after the determination, abandonment or breach of the contract) shall be referred to arbitration as per Clause 44 of the said conditions of contract. In case of any legal dispute, other than the arbitration, the court of jurisdiction shall be at the place written in the first line of this agreement.

The provisions of the Arbitration & Reconciliation Act 1996 or any Statutory modification or re-enactment thereof and of the rules made there under for the time being in force shall apply to arbitration proceedings under this clause.

In witness whereof the parties have set their respective hands the day and the year and the place hereinabove written.

		(CoA/Dy.CoA/S.O.(Admn.))
	In the	presence of
Seal	1	(Dv.F&A./S.O.(F&A))
Seal		(Dy.1 &A./3.O.(1 &A))
	2	
		(Project Co-coordinator/D.S.O./Engineer)
Signed by the said Succes	sful e-tenderer	
		presence of
	(1)	
Seal	(0)	
	(2)	

Signed by for and on behalf of the Museum/Centre

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GENERAL CONDITIONS OF CONTRACT

1. INTERPRETATION

The terms as used in the e-tender documents and agreement and named hereunder shall have the meanings herein assigned to them except where the subject or context otherwise requires:-

"This agreement" shall comprise of the Articles of Agreement along with the Appendix, the Conditions of Contract, the Priced Schedule of Quantities, Specifications and Drawings and CPM/PERT/BAR CHART attached hereto and including those to which only a reference is made herein.

"Work" or "Works" shall mean all work or works defined by Bills of quantities, Drawings, Specifications and such other work or works as the successful e-tenderer may be entrusted with for carrying out under this agreement as per Clause 4 of the Articles of Agreement.

"Museum/Centre" shall mean under the National Council of Science Museums which shall include the person for the time being in management of the Society and its assigns.

"Engineer" shall mean the Curator or Technical Officer authorised as such by the Museum/Centre or in the event of his ceasing to be Engineer for the work such other firm or person as may be appointed by the Museum/Centre as Engineer for this work. (Further elaboration given in Clause 2 below):

"Site" shall mean the site of the Horticulture works as shown on the site plan attached hereto including any buildings and erection thereon and any other land adjoining these to (Inclusive) as aforesaid allotted by the Museum/Centre for the use of successful e-tenderer.

"Act of Insolvency" shall mean any act of insolvency as defined by the Presidency Towns Insolvency Act, or the Provincial Insolvency Act or any Amending Statute.

"Notice in Writing" or "Written Notice" shall mean a notice or communication in written, typed or printed or printed characters sent (unless delivered personally or otherwise proved to have been received) by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have received when in the ordinary course of post, it would have been delivered. "Virtual Completion" shall mean that the works carried out are fit for occupation in every respect including removal of scaffolding, plant, surplus material and rubbish and cleaning of dirt from work and site.

Words imputing person include firms and corporations' words imputing the singular only also include the plural and vice versa where the context so requires.

Short headlines are given to each Clause for convenience only and they will not limit the meaning or scope of the Clause in any way.

2. ENGINEER

The plans, agreement and documents above mentioned shall form the basis of this agreement and the decision of the said Engineer or the other Engineer for the time being as mentioned in the said conditions, in reference to all matters or dispute as to material and workmanship shall be final and binding on both the parties.

The term "Engineer" shall mean the firm or person(s) appointed by the Museum/Centre to superintend the work. He/They will receive his/their instruction for the work from the Museum/Centre.

The successful e-tenderer shall afford the said Engineer(s) every facility and assistance for examining the work and materials and for checking and measuring works and materials.

The Engineer or any Authorised Assistant of the Engineer shall have power to give notice to the successful e-tenderer or to his Supervisors of non-approval of any work, or materials, and such work shall be suspended or the use of such materials shall be discontinued. The work from time to time be examined by the Engineer or the Engineer's Assistant but such examination shall not in any way exonerate the successful e-tenderer from the obligation to remedy any defects due to materials or workmanship not in accordance with the contract which may be found to exist at any stage of the work or may appear within the MAINTENANCE period mentioned in clause 20.

3. SCOPE OF THE CONTRACT

The successful e-tenderer shall carry out and complete the works in every respect in accordance with this contract and in accordance with the directions of the Engineer and to the satisfaction of the Engineer and the Museum/Centre. The

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Engineer may from time to time issue further drawings and/or written instructions, detailed directions and explanations in regard to :

- (a) The variation or modification of the design, quality or quantity of works for the addition or omissions or substitution of any work.
- (b) Any discrepancy in the drawings or between the schedule of quantities and/or drawing and/or specifications.
- (c) The removal from the site of any material brought therein by the successful e-tenderer and the substitution of any other materials there from.
- (d) The removal and/or re-execution of any works executed by the successful e-tenderer.
- (e) The dismissal from the works of any person employed thereupon.
- (f) The opening up for inspection of any work covered up.
- (g) The amending and making good of any defects under Clause 20.

The successful e-tenderer shall comply with and duly execute any work comprised in such instructions, detailed directions and explanations, provided always that if the Engineer's instructions involved variations from the priced Schedule of Quantities, such instructions shall be issued by the Museum/Centre and the successful e-tenderer shall take the action stipulated in Clause 34.

If the work shown on any such further drawings or detailed drawings or that may be necessary to comply with any such instructions, directions, or explanations be in the opinion of the successful e-tenderer, extra to that comprised in or reasonably to be inferred from the contract he shall before proceeding with such work, give notice in writing to this effect to the Engineer, and in the event of his not doing so three days before the commencement of such work the successful e-tenderer shall not be entitled to any allowance in respect of any such extra work. But if such notice has been duly given and the Engineer and the successful e-tenderer, fail to agree as to whether or not there is any extra, then if the Engineer decides that the successful e-tenderer is to carry out the said work, the successful e-tenderer shall do so accordingly, and the question whether or not there is any extra and if so, the amount thereof shall failing agreement be settled by the Arbitration as provided in Clause 44 on a reference being made by the successful e-tenderer.

4. SCOPE OF WORK

Even if not specifically mentioned in the schedule of quantities, the successful e-tenderer shall be deemed to have allowed necessary material, labour, tools and plants etc. required for satisfactory completion of the items of work as indicated in drawings and description given in the specifications, which are attached herewith unless the item specifies labour only or otherwise. Rates quoted also apply for work in patches, strips, small or large areas, and for different shapes and in different sizes and in different planes (Horizontal/vertical or inclined).

5. INSPECTION OF SITE

The e-tenderer must visit site before giving e-tender and must get acquainted with the working conditions.

The e-tenderer shall examine all specifications, e-tender conditions and drawings before e-tendering for the works.

The e-tenderer shall obtain all information relating to local regulations, bye-laws, application of any and all laws relating to his work or profession. No additional claims shall be admissible on this account.

6. WATER, ELECTRICITY AND GODOWN, SITE OFFICE

The successful e-tenderer shall construct at the site at their own cost temporary godown, site office within the mobilisation time as described in NIT Clause 23, of appropriate size. They will also arrange at their own cost supply of water and electric power at site required by them for Horticulture work.

7. SUCCESSFUL E-TENDERER TO PROVIDE EVERYTHING NECESSARY

The successful e-tenderer shall provide everything necessary for the proper execution of the works according to the true intent and meaning of the drawings and specifications and bill of quantities taken together, whether the same may or may not be particularly shown on the drawings or described in the specifications or included in the bill of quantities, provided that the same is to be reasonably inferred there from and if he finds any discrepancy in the drawings, or between the drawings and specifications and bill of quantities, he shall immediately refer the same to the Engineer who shall decide which shall be followed. Figured dimensions shall be followed in reference to scale.

The Successful e-tenderer shall make his own arrangements for laying temporary water and electrical power lines including excavation if necessary so as not to cause any obstructions along locations approved by the Engineer. The water supply lines, hose pipes, electrical lines, underground or overhead etc. belonging to them should not cause damage to the property of the museum/centre including gardens, plants, flowers, hedges, flower pots in the Campus etc. Any expenditure incurred by the museum/centre due to damage so caused shall be debited to the Successful e-tenderer's account. It is their complete responsibility to ensure that the garden

area and its approaches and other areas not allocated to them are not encroached upon by their men and materials. They have to provide a fence at their cost to confine the activities of Horticulture work, labour and materials, to the Horticulture work area as approved by the Engineer or his representative. The bitumen carpeted road in front of museum/centre's office, Science and Exhibits Laboratory, Stores and Workshop or garden paths and defined areas will not be allowed to be used by their labour, materials, trucks and other modes of transport system. Their labour is not allowed to use Campus grounds for baths, calls of nature etc.

The museum/centre shall on no account be responsible for the expenses incurred by the successful e-tenderer for hired ground or electric power or water obtained from elsewhere.

8. DRAWINGS, DESIGNS ETC.

Contract drawings are diagrammatic but shall be followed as closely as actual Horticulture work permits. Any deviations made shall be in conformity with the architectural and other service drawings.

Architectural drawings shall take precedence over electrical and other service drawings as to all dimensions.

Successful e-tenderer shall verify all dimensions at site and bring to the notice of the Engineer all discrepancies or deviations noticed. The Engineer's decision shall be final and binding.

All drawings issued by the Museum/Centre are the property of the Architects and shall not be lent, reproduced or used on any other works than intended without the written permission of the Architects.

Large size details and manufacturer's dimensions for materials to be incorporated shall take precedence over small scale drawings.

One complete set of drawing, specifications and schedule of quantities shall be furnished by the Engineer to the successful e-tenderer and the Engineer shall furnish, within such time as he may consider reasonable, one copy of any additional drawing which in his opinion may be necessary for the execution of any part of work. Such copies shall be kept on the works, and the Engineer and his representatives shall at all reasonable times have access to the same and they shall be returned to the Engineer by the successful e-tenderer before the issue of the certificate for the balance of this account under the contract.

Museum/Centre will make all efforts to give all drawings, designs, decision etc. from time to time and the successful e-tenderer shall make timely requests for the same. No claim whatsoever shall however be entertained for compensation for the delay in supply of drawings, designs, decisions, running payments, etc. from the Successful e-tenderer. Drawings shown at the time of issue of e-tenders and forming part of the contract shall indicate scope of work and drawings issued subsequently during the execution of work shall be deemed to be drawings elaborating the basic scheme. If any detailed drawings show an item for execution, which in the opinion of the successful e-tenderer is not covered under the items of the contract, he shall immediately refer it to the Engineer, for final decision. Decision of the Engineer as to whether it is an extra item or not or whether it is covered by contracts and if not what extra rate should be paid shall be final and binding on both the parties to the contract i.e. Museum/Centre and the Successful e-tenderer.

9. REFERENCE DRAWINGS & SHOP DRAWINGS

Reference Drawings

The Successful e-tenderer shall maintain one set of all drawings issued to him as reference drawing. These shall not be used at site.

All corrections, deviations and changes made at the site shall be shown on these reference drawings for incorporation in the completion drawings. All changes to be made shall be initiated by the Engineer.

Shop Drawings

The Successful e tenderer at his own cost shall submit to the Engineer as well as to the Architect four copies of shop drawings related to structural steel work, Aluminium door/window, bar bending schedule, Electrical work, Air conditioning work etc. for approval.

10. SCHEDULE OF RATES AND SPECIFICATIONS

Specifications as attached herewith shall be applicable. However, the e-tenderer shall include in his rates all such items of work which are not specifically included in the e-tender schedule but are required to be executed to complete the works in accordance with the drawings, specifications etc. The Museum/Centre is not bound to follow the practice and mode of measurements followed by other departments.

11. ERROR IN SCHEDULE OF QUANTITIES, IF ANY

Should any error appear in the bill of quantities, other than the E-tenderer's prices and calculation, it shall be rectified by the Engineer after informing the Museum/Centre. Such variation shall constitute a deviation of the contract and shall be dealt with as hereinafter provided.

12. NOMENCLATURE OF ITEM

Nomenclatures of the items of works mentioned in the priced schedule are only a brief description of the work. The work shall have to be executed in accordance with the specifications for the work to the satisfaction of the Engineer of the work. Any omission in description will not absolve the successful e-tenderer from his responsibilities to complete the work in a satisfactory manner.

13. METRIC UNITS

The bills of quantity indicate the unit of Metric system. The mode of measurement of different items of work shall be as per details contained in specification and special conditions, with the equivalent of the units mentioned therein in Metric System.

14. CPWD/PWD SPECIFICATIONS AND I S CODES

CPWD/PWD specifications & relevant I.S. Code of practice shall be applicable, for all items of work.

15. ORDER OF PRECEDENCE

If any discrepancy is noticed between the conditions and specifications, drawing etc. the following would be the order of precedence:

- (a) Schedule of Quantities.
- (b) Notice Inviting E-tender (NIT)
- (c) General Conditions of Contract (GCC) & GENERAL CONDITIONS OF LANDSCAPE & HORTICULTURE WORKS
- (d) Drawings and notes thereon.
- (e) Specifications for Horticulture & General Building (civil works) etc.
- (f) CPWD/PWD Specifications & I.S. codes.

16. SETTING OUT WORK ETC.

- (a) The successful e-tenderer at his own expense shall set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions and alignment of all parts thereof. If at any time any error shall appear during the progress of any part of the work, the Successful e-tenderer shall at his own expense rectify such error if called upon to the satisfaction of the Engineer.
- (b) All soil, filth, or other matter of an offensive nature taken out of any trench, sewer, drains, cesspool or any other place shall not be deposited on the surface, but shall be at once carted away by the Successful e-tenderer to some pit or place to be provided by him.

17. MATERIALS

All materials used for this work shall be conforming to the Specifications.

As far as practicable materials shall conform to the latest Indian Standards as amended upto-date. All materials used on the project shall be approved by the Engineer before use.

Successful e-tenderer may be required to purchase such materials of particular make or from a particular source if in the opinion of Engineer, the same is necessary and is required for the proper and reasonable compliance of the specifications and in the interest of better quality of work.

(a) Storage of Materials

All materials shall be stored in a proper manner protected from natural elements so as to avoid contamination and deterioration.

Successful e-tenderer's store shall be open to inspection by the Engineer at all reasonable hours

Locations of stores and storage yards shall be approved by the Engineer prior to Horticulture work or occupation. Successful e-tenderer shall take adequate protection of the materials against fire and other calamities.

All watch and ward staff for his work shall be appointed and maintained by the Successful e-tenderer at his own expense.

(b) Inspection and Testing of Materials

The Successful e-tenderer at his own expense shall make all necessary arrangements for carrying out tests on materials as required by the Engineer. He shall also be required to produce manufacturer's test certificates for the materials supplied by him whenever required by the Engineer. The tests carried out shall be as per the relevant Indian Standards in approved laboratories. The Museum/Centre reserves the right to appoint the testing authorities.

18. FAULTY MATERIALS AND WORK

- (a) The Engineer shall during the progress of the work has power to order in writing from time to time the removal from the work, within such reasonable time or times as may be specified in the order, to any materials and/or Workmanship which in the opinion of the Engineer are not in accordance with the specifications or the instructions of the Engineer. The substitution of proper materials or any workmanship and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the drawings and specifications or instructions shall have to be forthwith carried out by the Successful e-tenderer at his own cost upon receiving such order. In case of default on the part of the Successful e-tenderer to carry out such order the Museum/Centre shall have the power to employ any other person to carry out the same and all the expenses consequent thereon or incidental thereto shall be borne by the Successful e-tenderer and shall be recovered from them by the Museum/Centre from any money due to or that may become due to the Successful e-tenderer or from the amount of retention money.
- (b) In lieu of rectifying the work not done in accordance with the contract the Engineer may, with the consent of the Museum/Centre allow such work to remain, and in that case may make allowance for the difference in value together with such further allowance for damage to the Museum/Centre as in their opinion may be reasonable.

Provided always that nothing in this clause shall relieve the Successful e-tenderer from his liability to execute the works in all respect in accordance with those terms and upon and subject to the conditions of this contract or from his liability to make good all defects.

19. ACCESS

The Museum/Centre or its representatives shall at all reasonable time have free access to the works and/or to the workshops factories or other places where materials are being prepared or constructed for the contract and also to any place where materials are lying or from which they are being obtained and the Successful e-tenderer shall give every facility to them for inspection, examination and testing of the materials and workmanship. Except the representative of Public Authorities and those mentioned above, no person shall be allowed on the works at any time without the prior written permission of the Engineer or the Museum/Centre.

If any work is to be done at a place other than the site of works the Successful e-tenderer shall obtain prior written permission of the Engineer for doing so.

20. MAINTENANCE PERIOD AND DEFECTS AFTER COMPLETION

MAINTENANCE, Period shall be one year from the date of virtual completion of work, as certified by the Museum/Centre. Any defect, shrinkage or other faults, which may appear within the MAINTENANCE period, in the opinion of the Engineer, arising from materials or workmanship not in accordance with the contract or from failure to take due precautions, shall upon the directions in writing of the engineer and within such reasonable time as shall be specified therein be amended and made good by the Successful etenderer at his own cost. In case of default, the Museum/Centre may employ and pay any other person/person to amend and make good such defect, shrinkage or other faults and all damage, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Successful e-tenderer.

Such damage, loss and expenses shall be recoverable from the Successful e-tenderer by the Museum/Centre or may be deducted by them from any money due or that may become due to the Successful e-tenderer. The Museum/Centre may also in lieu of such amendments deduct from any money due to the Successful e tenderer, a sum to be determined by the Engineer equivalent to the cost of amending such works, and in the event of the amount retained under Clause 32 (the amount held as retention money) being insufficient, recover the balance from the Successful e-tenderer, together with expenses the Museum/Centre may have incurred in connection therewith. The Successful e-tenderer shall remain liable under the provisions of this clause notwithstanding the signing by the Engineer of any certificate or the passing of any bills.

21. OPENING OF WORK

- (a) All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the supervision of the Museum/Centre, Engineer or their representatives.
- (b) The Successful e-tenderer shall notify the Engineer in writing immediately after the trenches or executions, as shown in the drawings, are executed or as soon as any ground is cut into which from unexpected causes, appears to need immediate attention. After notifying the Engineer he shall await instructions which shall be given within seven days of receipt of such notice. If the Successful e-tenderer puts in, any part of the foundations before he has notified the Engineer and received instructions, he shall be liable to reinstate all work that may subsequently at any time, be damaged on account of any defect or insufficient foundations. The Successful e-tenderer shall at the request of the Engineer, within such time as indicated by the Engineer, shall open up for inspection

any other work and should the Successful e-tenderer refuse or neglect to comply with such request, the Museum/Centre through the Engineer may employ other workmen to open up the same. If the work has been covered up in contravention of Engineer's instructions, or if on being opened up, be found not in accordance with the drawings and specifications or the instructions of the Engineer, the expenses of opening up and covering it up again, whether done by the Successful e-tenderer or such other workmen shall be borne by or be recoverable from the Successful e-tenderer or may be deducted from any money due or which may become due to the Successful e-tenderer or from the amount held as retention money. If the work has not been covered up in contravention of such instructions, and be found in accordance with said drawings and specifications or instructions, the expenses aforesaid shall be borne by the Museum/Centre and shall be added to the contract sum provided always that in the case of foundations or of any other urgent work so opened up and requiring immediate attention, the Engineer shall within seven days after receipt of written notice from the Successful e-tenderer that the Work has been so opened, make or cause to make the inspection thereof and at the expiration of such time if such inspection shall not so have been made, the Successful e-tenderer may cover the same and shall not be required to open it up again, except at the expense of the Museum/Centre.

22. WORK IN SUBSOIL WATER/RAIN WATER/WATER

If during execution of work, sub-soil water is met with, or water enters the working space due to rains or any other cause, the Successful e-tenderer shall do dewatering using pumps or manual labour and also carry out additional work consequent thereupon, including shoring, strutting, work in liquid mud, sludge etc. without extra payment.

23. HEIGHTS

Successful e tenderer's rates shall include lifts upto all heights given in drawings or as required during execution. They should satisfy themselves for correctness and allow for variation if necessary. Nothing extra will be paid for additional lifts except where special items for lifts exist in schedule. E tenderer shall include in his e tender rates allowance for works at extra heights required for double or multiple staging, tall centering, scaffolding etc. for all items including extra labour if any. If any deviation from the contract drawings in respect of height is noticed by the e tenderer in any subsequent working drawing issued to him during continuance of the works that must be brought to the notice of the Engineer (in writing) sufficiently before commencing execution of the work. The decision of the Engineer as to whether this will be an extra item or not or whether the Successful e tenderer is entitled to get any extra payment or not for execution of this extra height will be final and binding.

24. SCAFFOLDING, CENTERING & SHUTTERING

The Successful e tenderer shall use external scaffolding to ensure true line in vertical and horizontal planes. Centering, shuttering and scaffolding required for execution of this work may vary from single floor height to multifloor heights, which may require multiple staging, scaffolding, centering and shuttering. Since the payments will be made to the successful e tenderer at net quoted rates, irrespective of the heights involved the e tenderers must see and study the drawings carefully before e tendering their rates.

25. GLAZING

If glass of required thickness is not available in the market the successful e tenderer shall have to use next higher thickness available without any extra payment. Rate for glazing shall include for providing and fixing either clear or frosted glass as shown in drawings or as directed by the Engineer.

26. WOOD WORK

Sizes mentioned in schedule of quantity or in drawings are the finished sizes. Successful e-tenderer shall allow necessary increase in sizes for planning required. In case the sizes of wooden members fixed are less than the one shown in the drawing schedule of quantity allowing for tolerance, payment will be made for actual size used at site. The rate quoted shall also include the allowance for curved or tapered or any other shape of the wooden member.

Wherever the wooden member abuts against masonry/RCC work, all the unexposed surfaces of wood work shall be required to be treated with two coats of suitable ant termite paint. E-tenderer's rates shall include application of two coats of ant termite paint.

27. SITE CLEARANCE AND CLEAN UP

The Successful e-tenderer shall, from time to time clear away all debris and excess materials accumulated at the site.

After all fixtures, equipment and appliances have been installed and commissioned, they shall clean up the same and remove all plaster, paints, stains, stickers and other foreign matter of discolouration leaving the site in ready to use condition.

On completion of all works they shall demolish all temporary storages put up by them, remove all surplus materials and leave the site in a broom clean condition.

28. RATES

The rates quoted by the Successful e-tenderer shall be paid at net rates. He should include in his rates allowance for increase or decrease in the prices due to market fluctuation. He shall not be entitled to any separate amount on account of GST, other taxes, labour cess or any other cess, duties, etc., which are in force or will be enforced or enhanced by Government or local bodies during contract period or after e-tendering. Accepted e-tender rates shall not be changed due to changes in wages of labour either.

29. QUANTITIES

All the quantities given in schedule of quantities are provisional.

The e-tenderers shall be deemed to have given Balanced Rates for each item, irrespective of the quantities given. Also irrespective of variation in quantities to any extent the e-tenderer shall be paid at accepted contract rates only. Museum/Centre reserves the right to increase or decrease quantities to any extent

30. ESCALATION CLAUSE

(This clause is deleted & not applicable for this tender)

31. SECURED ADVANCE

- (a) The Successful e tenderer shall not be entitled to be paid for the materials brought to site, which remains unused or unfixed. The Engineer, with the concurrence of the Museum/Centre may pay an advance upto 85% of the cost of such material as calculated from the respective e tender item. When in any certificate, of which the Successful e tenderer has received payment the value of material at site has been included, such materials shall become the property of the Museum/Centre but the Successful e tenderer shall be liable for any loss or damage to any such material. They shall furnish an indemnity bond in the prescribed form along with their claim for advance against materials brought to site for bonafide use in specific items under the schedule of quantities.
- (b) The secured advance so paid shall be adjusted in the running account bills as and when the materials are used subject to wastage.
- If the specification or schedule of quantities of the work provided use of any special description of materials to be supplied by the Museum/Centre or it is required that the Successful e-tenderer shall use certain stores to be provided by the Museum/Centre, such materials and stores and the price to be charged therefore as hereinafter mentioned, being so far as practicable for the inconvenience of the Successful e-tenderer but not so as in any way to control the meaning or effect of this contract, the Successful e-tenderer may be supplied with such materials and stores as and when required from time to time to be used by him for the purpose of the Contract only, and the value of the full quantity of material and stores supplied at the rates specified in the said schedule appendix memorandum may be set off or deducted from any sum then due or thereafter to become due to the Successful e-tenderer under the contract or otherwise, or from the retention money or against the sale proceeds thereof, if the same is held up in Government Securities, the same or sufficient portion thereof being in this case sold for the purpose. All materials supplied to the Successful e-tenderer by the Museum/Centre shall remain absolute property of the Museum/Centre. The Successful e tenderer shall be fully responsible for their storage andmaintenance and shall not on any account remove those from the site of the work. The material shall at all times be open to inspection by the Engineer and/or the Museum/Centre. At the time of the completion of work or termination of the contract, or even earlier if so required by the museum/centre, the same shall be returned to them. The successful e tenderer shall not be entitled to return any such material unless the same is, in the opinion of the Engineer of the Museum/Centre in perfectly good condition; and shall have no claim for compensation on account of any such materials so supplied to him as aforesaid being unused by him or for any wastage in or damage to any such materials.
- (d) Owing to restriction in obtaining certain materials from the market, the Museum/Centre may undertake to supply certain materials at specified rates as stated in the appendix. In ease of delay in supply of these materials by the Museum/Centre, the Successful e-tenderer is required to keep himself in touch with the day to day position regarding the supply of such materials from the Museum/Centre and to adjust the progress of the work in a manner that his labour do not remain idle, nor thereby lodge any claim due to or arising out of delay in obtaining such materials. No claim whatsoever shall be entertained by the Museum/Centre on account of delays in supply of these materials.
- (e) The Successful e-tenderer shall ensure that only the required quantities of materials are got issued and the surplus quantities of materials, if in good condition, shall be taken by the Museum/Centre at the rates fixed in the Appendix.
- (f) Essentiality Certificates/Permits/Recommendation Letters for materials available at controlled rates etc. would be given by the Museum/Centre, if required by the successful e tenderer. It will, however, be their responsibility to obtain materials against the certificates or otherwise, and no claim on this account or any extension of time for completion of works will be entertained by the Museum/Centre. The Successful e-tenderer shall use materials thus procured exclusively in this work and for misuse, if any, he shall be solely responsible.

32. RETENTION OF MONEY

This shall mean and be 10% of the total gross value of the work as paid for against this contract including the performance guarantee and the amount which shall be recovered from the running bills. In case of termination of contract, this retention money shall be forfeited and amount necessary to make up this amount shall be recovered from the money due to the successful tenderer under this contract, or any other contract. The successful tenderer can give retention money in the form of a Bank Guarantee from a Commercial Bank in approved format to the extent of 10% of the total cost of work awarded valid for a period equal to completion period plus one year (which will have to be suitably extended to cover MAINTENANCE period and extended period of contract whichever is later). Tenderers who have deposited

earnest money/performance guarantee in Bank Draft along with the tender could get refund of earnest money deposited in cheque or Bank Draft or wire/Bank transfer after the Bank Guarantee for the 10% of the total cost is received and accepted by the Museum/Centre. The retention money in the form of Bank Guarantee will not be accepted in parts.

The successful tenderer shall have to extend the Bank Guarantee period, from time to time at least three weeks before the expiry of a Bank Guarantee to cover the MAINTENANCE period, reckoned from the date of virtual completion. In case they fail to extend the Bank Guarantee at least three weeks before its expiry, it shall be considered a breach of contract on the part of the successful tenderer and hence, the Museum/Centre shall be free to demand or encash the Guarantee money from the Bank. Provided all defects are removed and the retention money is not forfeited or has not become liable to be forfeited under this contract.

100% of the retention money without interest will be refunded to the successful e-tenderer after satisfactory completion of one year (MAINTENANCE Period) from the date of virtual completion of work and after the successful e-tenderer has replaced all the defects pointed out to him.

Note: - EMD and Performance Guarantee deposited in other modes than online transfer, has to be drawn or duly pledged in favour of the Birla Industrial and Technological Museum payable at KOLKATA.

33. AUTHORITIES, NOTICES AND PATENTS

The successful e-tenderer shall confirm to the provision of any Act of the Legislature relating to the works, the Regulations and Bye-Laws of any corporations and of any electric and other Companies and/or authorities with whose systems the structure is proposed to be connected, and shall, before making any variation from the drawings or specifications that may be necessitated by so conforming, give to the Engineer written notice, specifying the variation proposed to be made, and the reason for making it, and apply for instructions thereon. If compliance with this clause involves any extra work not included in this contract, he shall specify these items of work and the allowance or extra payment required on their account. In case he shall not, within seven days, received such instructions, shall proceed with the work, conforming to the provision and/or regulation of bye-laws in question.

The amount claimed as an extra or whether there is an extra or not shall be decided by the Engineer and will be subject to arbitration clause if so required.

The successful e-tenderer give all notices required by the said regulations or bye-laws to be given to any authority and pay to such authority or to any public office all fees that may be properly chargeable in respect of the works and lodge the receipts with the bill.

The successful e-tenderer shall indemnify the Museum/Centre against all claims in respect of patent rights, and shall defend all action arising from such claims and shall himself pay all royalties, licence fees, damages, cost and charges of all and every sort that may be legally incurred in respect thereof.

34. DEVIATIONS

The successful e-tenderer may when authorise and when directed, in writing by the Engineer with the approval of the Museum/Centre add or omit or vary the works shown upon the drawings, or described in the specifications, or included the bill of quantities, but they shall make no addition, omission or variation without such authorisation or direction. A verbal authority direction by the Engineer shall, if confirmed by him in writing within seven days, be deemed to have been given in writing.

No claim for an extra shall be allowed unless it shall have been executed under the provisions of Clause 33 or by the authority of the Engineer with the concurrence of the Museum/Centre as therein mentioned. Any such extra if herein referred to, as an authorised extra shall be governed by Clause 35. No variation i.e. additions or substitutions shall vitiate the contract.

35. PRICE FOR DEVIATIONS

Deviations shall be valued at the net rates contained in the E-tenderers' original e-tender or where the same may not apply direct at rates analogous to the prices therein contained. If the altered, additional or substituted work included any class of work for which no rate is specified in the contract, then the Successful e-tenderer shall within seven days of the date of receipt of the order to carry out the work, inform the Engineer with a copy to the Museum/Centre the rate which he intends to charge for such class of work with proper analysis. In the event of his not doing so, within a reasonable time before the commencement of such work, he shall not be entitled to any allowance or payment in respect of any such extra work. When such notice has been duly given, the Engineer with the consent of the Museum/Centre may agree to such a rate but if the Engineer does not agree to this rate, the Engineer may cancel his order to carry out such class of work and arrange for it to be carried out departmentally or through any other agency or in such a manner as he may consider advisable or he may decide that the Successful e-tenderer shall carry out such items of work and in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him according to such rate or rates as shall be fixed by the Engineer which will, however be subject to the Arbitration Clause.

However, in respect of the rates for extra/new items, if there are any, the opinion of the Engineer as to whether it is an extra item or not, and if so, what rates should be paid shall be final and binding on the successful e-tenderer shall be derived from contract items so far as applicable and the rates which cannot be derived from contract will be fixed on the basis of actual cost of materials and labour, plus 15% as successful e-tenderers' overheads and profits on all trades except on the cost of materials supplied departmentally.

Successful e-tenderer shall not claim any idle and remobilization charge for interim delay due to late decision by the Museum/Centre. Such legitimate interim delays shall however be considered for extension of time, if any.

Furthermore, they shall submit analysis of rates with justifications for claiming extra on any deviation item at least 45 days prior to the probable date of execution of the referred item.

36. MEASUREMENTS

In case of dispute between the successful e-tenderer and the Museum/Centre as to under which item a particular work is to be measured the decision of the Engineer shall be final and binding on both the parties to the contract. If for any items, the mode of measurements is not specified the decision of the Engineer about the mode of measurement shall be final and binding on both the parties to the contract.

37. PREPARATION OF RUNNING AND FINAL BILLS

Minimum value of work for interim certificate/payment shall be 20% of the tendered value (at discretion of the Museum/Centre) but not more than one running bill, in a month, if paid separately.

75% advance bill against work done but unmeasured and adjustable fully in the next running bill may be certified by the Engineer, at his discretion in the interest of the work.

The Engineer or his representative shall take measurements in presence of Successful e-tenderer's representative and record them in the Measurement Book from time to time and shall prepare abstract for running and final bill, including recovery statements. The bill abstract shall be prepared on standard CPWD form on the basis of abstract of quantities prepared by the Engineer in triplicate. The Successful e-tenderer should sign the bill and Measurement Book with the remark "Measurement and bill accepted". However, in the final bill, the successful e-tenderer shall have to certify – "The bill is accepted in full and final settlement of all claims and demands against this work".

In case a large amount is blocked in the final bill pending technical/audit check, advance upto the extent of 75% of net final bill amount may be paid to the successful e-tenderer, with the approval of the Engineer at his direction even after the completion date is over.

The recovery from Running Account Bills for the materials issued by the Museum/Centre shall be made on the basis of the quantity consumed in the work as assessed by the Engineer, giving a due allowance for wastage. The Successful e-tenderer shall submit once a month a statement showing the materials received, consumed and the balanced carried over to the subsequent month so that a watch could be maintained on the material.

38. CERTIFICATES AND PAYMENTS

- (a) The Engineer may from time to time intimate in writing to the Successful e-tenderer that he requires the works to be measured and they shall attend or send qualified agent to assist the Engineer or the Engineer's representative in taking such measurements, and calculations and to furnish all particulars or to give all assistance required by the Engineer. Should they not attend or neglect or omit to send such agent then the measurement taken by the Engineer or approved by him shall be taken to be correct measurements of the work unless objected to within one month of their being recorded in the measurement book or books. Such measurements shall be taken in accordance with the mode of measurements mentioned in the specifications.
- (b) The Successful e-tenderer or his agents may at the time of measurement take such notes of measurements as they may require.
- (c) The Engineer or his authorised representative will issue on the basis of necessary measurement interim valuation certificates to the Successful e-tenderer in respect of items of work, rates for which exist in the priced schedule of quantities or have been subsequently agreed upon between the parties, and shall send the measurement books and the valuation certificates to the Museum/Centre. The Successful e-tenderer shall be entitled under these certificates of the Engineer to payments, within 15 days from the date of each certificate, unless objected as provided in sub-clauses (a) & (b) at the rate of maximum 90% of the value of work so executed and the balance being retained towards retention money. The engineer shall issue such certificates within fifteen days of notice from the Successful e-tenderer provided measurements have been taken and the value of the work done since last payment exceeds the amount stated in the appendix and not more than one certificate is required in a fortnight, provided always that the issue by the Engineer of any certificate during the progress of the work or after their completion shall not have any effect as a certificate of satisfaction or relieve the Successful e-tenderer from his liability under Clause 20 and 21. Provided all defects are removed and the retention money is not forfeited or has not become liable to be forfeited under this contract, 100 % of the amount under retention money shall be refunded without interest after one year of MAINTENANCE period is over from the date of virtual completion of the works or the final bill is passed for payment whichever is later.
- (d) All intermediate payments shall be recorded as payments by way of advance against the final payment only and not as payment for work actually done and completed. The final bill shall be submitted by the Successful e-tenderer within 3 months of the date fixed for completion of the work. The measurement of the work taken by the Engineer or his

representatives after one week's notice to the Successful e-tenderer shall be final and binding on him unless objected to within one month of their being recorded in the measurement books.

- (e) The Museum/Centre may in consultation with the Engineer, but absolutely at his discretion, make an advance payment on account, which will be merged in the next intermediate payment, based on measurements.
- (f) Advance for materials brought to site: The Successful e-tenderer shall execute a bond in favour of the Museum/Centre in the prescribed format attached hereto for each advance or intermediate payment received by him. If the Successful e-tenderer commits any default in the terms of the said bond and he fails to pay the bond amount, the Museum/Centre shall have the power to:
 - (i) Seize and utilise the said materials or any part thereof for the completion of the works.
 - (ii) Remove and sell by public auction the materials seized or any part thereof, and out of the proceeds of the sale, retain all sums repayable to the Museum/Centre together with interest thereon at the rate prescribed by Govt. of India from time to time for capital outlays.
 - (iii) Deduct all or any part of moneys owing from out of the retention money or any other sum or sums due to the Successful e-tenderer under this agreement.
- (g) The Successful e-tenderer agrees that before final payment shall be made on the contract, he will sign and deliver to the Museum/Centre either in the measurement books or otherwise as required, a valid release and discharge certificate from any and all claims and demands whatever from the Museum/Centre for all matters arising out of or connected with the contract.

39. TIME AND DAMAGES FOR NON-COMPLETION OF WORK IN TIME

- (a) All the Horticulture work works shall progress strictly as per the enclosed CPM/PERT/BAR CHART. If, however, the Successful e-tenderer desires some minor modifications in the same he may apply to the Museum/Centre within mobilisation time and before execution of the agreement indicating the reasons for which changes are required. The Museum/Centre may after scrutiny, agree to the modifications suggested if the reasons cited by the successful e-tenderer are considered valid. The decision of the Museum/Centre in this respect will be final and binding. The modifications, if any, are to be incorporated in the CPM/PERT/BAR CHART and this will form a part of the agreement.
- (b) The starting time specified for carrying out of the work as entered in the CPM/PERT/BAR CHART shall be reckoned from the date of issue of the Award of Contract. The date of completion or such date as is duly extended under Clause 40 shall be strictly observed by the Successful e-tenderer. The work shall, throughout the stipulated period of the contract, be proceeded with all diligence (Time being deemed to be the essence of this Contract) by the successful e-tenderer strictly according to the CPM/PERT/BAR CHART which is a part of this agreement.
- (c) At any stage during the execution of the work if the work lags behind the target indicated in the CPM/PERT/BAR CHART for reasons directly attributable to the Successful e-tenderer, he shall be liable to pay as agreed liquidated damages equivalent to half percent of the total cost of work awarded every week for the period the work lags behind the CPM/PERT/BAR CHART subject to a maximum of 10% of the total value of work, awarded or gross value of work done, whichever is greater.
- (d) In the event of Successful e-tenderer's inability to complete the Horticulture work by the scheduled date of completion, the Museum/Centre shall have the right to terminate the contract as per Clause 42 or allow the successful e-tenderer to continue and complete the work within specific date. In the latter case, during the period of continuation, the successful e-tenderer shall pay as agreed liquidated damage equivalent to one per cent of the total cost of work awarded for every week that the work remains unfinished subject to a maximum of 10% of the total value of work awarded or gross value of work done, whichever is greater.

40. EXTENSION OF TIME

If the successful e-tenderer shall desire an extension of time for completion of the work on the grounds of his having been unavoidably hindered in its execution and for reasons not attributable to him on the following grounds: -

- by reason of any exceptionally inclement weather like Cyclone, severe flood etc., normal monsoon shall not be considered a
 valid reason for extension of time,
- (b) by reason of proceedings taken or threatened by, or legal disputes with adjoining or neighbouring owners,
- (c) due to delay in the work of other agencies or tradesman engaged or nominated by the museum/centre: if such delay is directly responsible for delay in execution of this work,
- (d) by reason of any general strike or lockout affecting the building made, strike or any kind of labour trouble in successful etenderer's own organisation shall not be a valid reason for extension,
- (e) in the event of delay in execution of work wholly attributable to delay in supply of drawings by Architect or Museum/Centre in spite of request from the successful e-tenderer well in advance, he shall apply in writing to the Engineer within seven days

of the date of the hindrance on account of which he desires such extensions as aforesaid and the engineer, with the consent of the Museum/Centre may if reasonable ground be shown therefore allow such extension of time, if any, be necessary or proper,

- (f) in case of the total value of the work exceeds the total value of the e-tender owing to deviation in quantities or extra items, the successful e-tenderer will be entitled to ask for extension of time in proportion to the increased value of work
- (g) No extension of time shall be given to the successful e-tenderer for non-supply or delay in supply of cement and/or steel as per Clause 56. The successful e-tenderer hereby agrees that extension of time requested for by him and granted by the Museum/Centre shall be treated as an extension of time allowed to them without any claim for compensation or damages for any reasons whatsoever including those for which the extension is granted.

If an extension of time is granted by the Museum/Centre for reasons of delay either attributable or not attributable to the successful e-tenderer as indicated above, then in both cases it shall be without any escalation.

41. SUSPENSION OF WORK BY THE SUCCESSFUL E-TENDERER

If the successful e-tenderer suspends the works without obtaining extension of time or in the opinion of the Engineer neglects or fails to proceed with due diligence in executing his part of the contract or if he makes default more than once in the manner mentioned in Clause 20 above the Museum/Centre or the Engineer shall have power to give notice in writing to the successful e-tenderer requiring that the works be proceeded with reasonable speed and output must be commensurate with the CPM/PERT/BAR CHART. Such notice shall specify the act of default on the part of the successful e-tenderer. After such notice has been given the Successful e-tenderer shall not be at liberty to remove from the site of work or from any ground continuous thereto any plant or materials belonging to him which had been placed thereon for the purpose of the work, and the Museum/Centre shall have a lien upon all such plants and materials to subsist from the date of such notice being given, until the notice have been complied with. Provided always that such lien shall not under any circumstances subsist after the expiration of thirty-one days from the date of such notice being given, unless the Museum/Centre has entered upon and taken possession of the works and site and of all such plants and materials until the works have been completed under the power hereinafter conferred upon it. If the Museum/Centre exercises the above power it may engage any other agency to complete the works or finish the works departmentally and exclude the successful e-tenderer, his agents and servants from entry upon or access to the same except that the successful e-tenderer or any one person appointed in writing by him and accepted by the Museum/Centre may have access at all reasonable times during the progress of works to inspect, survey and measure the works. Such written appointments marked with Museum/Centre's consent or a copy thereof shall be delivered to the Engineer before the person so appointed comes to the works. The Museum/Centre shall take such steps as, in the opinion of the Engineer may be reasonable and necessary for completing the works without undue delay & expense, using for that purpose the plants and materials above mentioned, in so far as they are suitable and adopted to such use. Upon the completion of the works the Engineer shall certify the amount of expenses properly incurred, consequent on the incidental to the default of the successful e-tenderer as aforesaid, in completing the works by other persons. Should the amount so certified as the expenses properly incurred, including Museum/Centre's overhead if the works were carried out departmentally, be less than the amount which would have been due to the Successful etenderer upon the completion of the works by him, the difference shall be paid to the Successful e-tenderer by the Museum/Centre. Should the amount of the former exceed the later, the difference shall be paid by the Successful e-tenderer to the Museum/Centre. The Museum/Centre shall not be liable to make any further payment or compensation to the Successful e-tenderer for or on account of the proper use of the plants for the completion of the works under provisions hereinbefore contained other than such payment as is included in the contract price. After the works have been so completed by person other than the successful e-tenderer under the provisions hereinafter contained, the Museum/Centre shall give notice to the Successful e-tenderer of such completion and may require him from time to time, before and after such completion, to remove his plants and likewise all such materials as aforesaid as may not have been used in the completion of the works, from the site. If such plants and materials are not removed within such reasonable time, the Museum/Centre may remove and sell the same, holding the proceeds, less the cost of the removal and sell, to the credit of the successful e-tenderer. The Museum/Centre shall not be responsible for any loss sustained by the successful e-tenderer from the sale of plants in the event of the successful e-tenderer not removing it after notice, or for any damage thereto or deterioration thereof in any event.

42. DETERMINATION OF CONTRACT BY THE MUSEUM/CENTRE

If the successful e-tenderer goes into liquidation, whether voluntary or compulsory or shall make an assignment or a composition for the benefit of the greater part, or shall enter into a Deed of Agreement with its creditors or if the Receiver of the Successful e-tenderer shall be unable, within fourteen days after notice to him requiring him to do so, to show to the reasonable satisfaction of the Museum/Centre that he is liable to carry out and fulfil the contract and if so required by the Museum/Centre to give reasonable security therefore or if the successful e-tenderer shall suffer execution to be issued or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors or the Successful e-tenderer or shall assign, charge or encumber this charge or encumber this contract thereunder or shall neglect or shall fail to proceed to perform all or any of the act, matters or things by the contract, to be observed and performed by the successful e-tenderer for three clear days after written notice shall have been given the successful etenderer in manner, matter hereinafter mentioned, requiring the successful e-tenderer to observer perform the same or shall use improper material or workmanship in carrying on the works or shall in the opinion of the Engineer not exercised such due progress as stipulated in the enclosed CPM/PERT/BAR CHART forming part of this contract which would enable the works to be completed within the time agreed upon or shall abandon the contract, then, and in any of said cases, the Museum/Centre may notwithstanding any previous waiver, determine the contract by a notice in writing in which case the retention money (including the earnest money and the initial security deposit) and whether paid in one sum or deducted by instalment shall stand forfeited and be absolutely at the disposal of the Museum/Centre. The Successful e-tenderer shall have no claim or compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made advances on account of or with a view to the

execution of the work or the performance of the contract. The successful e-tenderer shall not be entitled to recover or be paid any sum for any work actually performed under the contract unless and until the Engineer will have certified in writing the performance of such work and the value of work payable in respect thereof and the successful e-tenderer shall only be entitled to be paid the value so certified. The certificate of the Engineer shall be based on measurements taken by him or under his supervision and with due notice to the Successful e-tenderer and on rates in the priced schedule or as subsequently communicated by the Engineer with the approval of the Museum/Centre, under this agreement except for arithmetical errors, shall be final and conclusive. The Successful e-tenderer must remove his plant, materials, seaffolding etc. from the site within 10 days (ten days) of the receipt of the notice from the Museum/Centre after which they will vest in the Museum/Centre who may, dispose them off as per Clause 41 by sale or auction on account of and at the risk of the successful e-tenderer who will have no claim for loss or compensation on this account.

43. TERMINATION OF CONTRACT BY SUCCESSFUL E-TENDERER

If payment of the amount payable by the Museum/Centre under the certificate of interim payment issued by the Engineer in accordance with clause 38 shall be in arrears and unpaid for sixty days after notice in writing requiring payment of the amount shall have been given by the Successful e-tenderer to the Museum/Centre in manner hereinafter mentioned or if works be stopped for six months under the order of the Museum/Centre for any reason not connected with any default on the part of the Successful e-tenderer or by any injunction or other order of any court of law made for any reasons not connected with any such default on the part of the successful etenderer then and in any of the said cases the successful e-tenderer shall be at liberty to terminate the contract by notice in writing to the Museum/Centre and he shall be entitled to recover from the Museum/Centre payment for all works executed and for useful materials (but not plants) purchased for the purpose of the contract and is brought to the site. In arriving at the amount of such payment, the net rates contained in the successful e-tenderer's e-tender shall be followed, or where the same may not apply, rates proportional to the prices therein contained. Rates for materials may be determined by the Engineer on actual vouchers produced by the successful e-tenderer and/or prevailing market rates at the discretion of the Engineer. The Successful e-tenderer shall not be entitled to recover or be paid any sum for any work actually performed under the contract, unless and until the Engineer has certified in writing the performance of such work and the value payable in respect thereof and the successful e-tenderer shall only be entitled, to be paid the value so certified. The certificate of the Engineer shall be based on measurements taken by him or under his supervision after due notice to the successful e-tenderer and shall be final and conclusive except for arithmetical errors. The successful e-tenderer must remove his plant, materials, seaffolding-etc. from the site within ten days or such time as may be extended by the Museum/Centre in writing, from the receipt of the notice from the Museum/Centre after which they will vest in the Museum/Centre who may dispose them off as per Clause 42 by sale or auction on account of and at the risk of the successful e-tenderer who will have no claim for loss or compensation on this account.

44. ARBITRATION

- (a) Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, design, drawing, and instructions hereinbefore mentioned and so to any question, claim right, matter or thing 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 works, or the execution of the same whether arising during the progress of the work or after the completion or abandonment thereof but excluding disputes on material and workmanship as per Clause 17 & 18 which is binding on both parties, shall be referred to the sole arbitration of a person nominated by the Director General, National Council of Science Museums and if the former is unable or unwilling to act to the sole arbitration, of some other person appointed by the Director General, NCSM willing to act as such arbitrator. The submission shall be deemed to be submission to Arbitration under the meaning of the Arbitration & Reconciliation Act, 1996 or any statutory modification or re-enactment thereof for the time being in force. The award of arbitrator so appointed shall be final, conclusive and binding on all parties to this contract.
- (b) It is agreed that the Successful e-tenderer shall not delay the carrying out of the work by reasons of any reference to arbitration and shall proceed with the work with all due diligence and shall, until the decision of arbitration, abide by the decision of the Engineer duly conveyed to him.
- (c) The Arbitrator(s) may from time to time with the consent of the parties, extend the time for making and publishing the award.

45. COMPENSATION

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

46. WORK ON HOLIDAYS

Successful e-tenderer shall not carry out work on any Government holidays except with the permission of the Engineer. The contract period will be inclusive of such holidays.

47. WORK SUPERVISOR AND FOREMAN

The Successful e-tenderer shall keep a qualified and experienced Horticulturist for supervision of works to ensure best quality work. He shall also give all necessary personal superintendence during the execution of the works and as long thereafter as the Engineer may consider necessary until the expiration of the 'MAINTENANCE Period' stated in Clause 20 above. The Successful e-tenderer shall also during the whole time, the works are in progress, employ competent Foreman approved by the Engineer whose qualification must

conform to the requirements specified by the Engineer. In special cases he shall be constantly in attendance of the building while the men are at work. Any directions, explanations, instruction or notices given by the Engineer to such Foreman shall be held to be given to the Successful e-tenderer.

48. DISMISSAL OF WORKMEN ETC.

The Successful e-tenderer shall on the request of the Engineer immediately dismiss from the works any person employed thereon who may, in the opinion of the Engineer be unsuitable or incompetent or who may in the opinion of the Museum/Centre or the Engineer misconduct himself and such person shall not be again employed or allowed on the works without the written permission of the Engineer and/or the Museum/Centre.

49. ASSIGNMENT OR SUBLETTING OR BRIBES

- (a) This contract shall not be assigned or sublet without the written approval of the Museum/Centre. If the Successful e-tenderer shall assign or sublet this contract, or attempts to do so or become insolvent or commence insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, pre-requisite award, reward or advantage pecuniary or otherwise, shall either directly or indirectly be given, promised or offered by the Successful e-tenderer, any of his servants or agents to any officer of the Museum/Centre or to person who shall become in any way directly or indirectly interested in the Contract, the Museum/Centre may thereupon by notice in writing rescind the contract and the retention money of the Successful e-tenderer shall thereupon stand forfeited and be absolutely at the disposal of the Museum/Centre, and the same consequences shall ensure as if the contract had been rescinded under Clause 42 thereof and (in addition) the Successful e-tenderer shall not be entitled to recover or to be paid for any work therefore actually performed under the contract.
- (b) The whole of the works including the contract shall be executed by the Successful e-tenderer and he/they shall not directly or indirectly transfer or assign or underlet the contract or any part, share or interest therein nor shall he take a new partner without the written consent of the Museum/Centre and no subletting shall relieve the Successful e-tenderer from the full and entire responsibility of the contract or from active superintendence of the works during the progress.

50. OTHER PERSON ENGAGED BY MUSEUM/CENTRE

The Museum/Centre reserves the right to use the premises and any portion of the site for the execution of any work not included in this contract, which he may desire to have carried out by other persons, and the successful e-tenderer shall allow all reasonable facilities for the execution of such work, but is not required to provide any plant or materials for the execution of such works except by special arrangement with the Museum/Centre.

51. OTHER AGENCIES AND PROVISIONAL SUMS

- (a) The Successful e-tenderer is to afford all reasonable facilities to all other agencies, sub-agencies, specialists, merchants, tradesman and others who may at any time be appointed by the Engineer with the consent of the Museum/Centre for executing any work or supplying any goods relating to the Horticulture work, servicing, equipping or furnishing of the building under construction or in the compound. In case of delay in completion of his work due to other agencies' work, the Successful e-tenderer shall only have a right to ask for extension of time but no other claim on this or any other account shall be entertained by the Museum/Centre.
- (b) If any provisional sum is included in the bill of quantities, they are to be deducted wholly if not required or in part the Museum/Centre reserves to itself the right to appoint any agency to do the work allowed for in provisional sums and the successful e-tenderer shall not have any right to claim any profits on this account.

52. LABOUR WAGES AND REGULATIONS

Notwithstanding any contained in the conditions of this contract the Successful e-tenderer shall comply with the provision of the contract labour (Regulation & Abolition) Act 1970 and various rules framed thereunder by different State Government, in respect of all labourers directly or indirectly employed by the Successful e-tenderer in the works through labour contracts or otherwise the Successful e-tenderer shall be considered as "Principal Employer".

The Successful e-tenderer agrees to grant Provident Fund benefits in accordance with Employees Provident Fund Act 1962 and Scheme thereunder to his workers The successful e-tenderer shall pay not less than "fair wages" to labourers engaged by him on the work. No labour below the age of fourteen years shall be employed. The successful e-tenderer shall at his own expense provide or arrange for provision of footwear for any labour doing eement mixing work.

53. INSURANCE FOR DAMAGE TO PERSON AND PROPERTY

(a) The Successful e-tenderer shall be responsible for all injury to persons, animals or things and for all damages to property, structural and decorative, whether such injury or damage arise from carelessness or accident or in any way connected wherewith. This clause shall be held to include, *inter alia*, any damage due to causes as aforesaid to buildings (whether immediately adjacent or otherwise) and to roads, streets, footpaths, bridges or ways as well as all damage caused to the buildings and works forming the subject of this contract by the inclemency of weather. The Successful e-tenderer indemnifies the Museum/Centre and holds him harmless in respect of all expenses arising from such injury or damage to

person or property aforesaid and also in respect of any claim made in respect of injury or damages consequent upon such

- (b) The successful e-tenderer shall reinstate all damage of every sort mentioned in this clause, so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good and otherwise satisfy all claims for damage as aforesaid to the property or third parties.
- (c) The Successful e-tenderer also indemnifies the Museum/Centre against all claim which may be made upon the Museum/Centre during the currency of this contract by any employee or representative of an Employee of the agency, or any sub-agency, employed by him, for any injury to or loss of life or such employees, or for compensation payable under any law for the time being in force to any workman or to the representative of any deceased or incapacitated workmen.
- (d) The Successful e-tenderer also indemnifies the Museum/Centre in respect of any costs, charges and/or expenses, including legal costs as between Solicitor and client, occurring out of any award of compensation and/or damages consequent upon such claims.
- (e) The Museum/Centre shall be at liberty and is hereby empowered to deduct the amount of any damages, compensation cost, charges and/or expenses arising or ascertaining from or in respect of any such claim and/or damages as aforesaid from any sum, or sums due to, or become due to the Successful e-tenderer.

54. NOTICE

Notice for the Museum/Centre, the Engineer or the Successful e-tenderer may be served personally or E-mail or sent by registered post addressed to the office of the Museum/Centre or the last known place of business of the Engineer and the Successful e-tenderer or in the case of the successful e-tenderer also be being left on the works. Any notice sent by registered post shall be deemed to be served at the time when in the ordinary course of post, it would be delivered.

55. APPOINTMENT OF APPRENTICES AS PER APPRENTICES ACT

The Successful e-tenderer shall during the currency of the contract when called upon by the Engineer engage and also ensure engagement by sub-agencies and other employed by the successful e-tenderer with the works such number of apprentices in categories mentioned below and for such periods as may be required by the Engineer. The Successful e-tenderer shall train them as required under the Apprentices Act 1961 and the Rules made thereunder and shall be responsible for all obligations of the Museum/Centre under the said act including the liability to make payments to apprentices as required under the said Act.

(a) In Respect of Horticulture works: One apprentice for every 7 person engaged in this category

The Successful e-tenderer shall comply with the provision of Apprentices Act 1961 and Rules and Orders issued hereunder from time to time.

If the Successful e-tenderer fails to do so, his failure will be deemed to be a breach of contract and the Museum/Centre reserves the right to cancel the contract. The Successful e-tenderer also shall be liable to any pecuniary liability arising on account of any violation by him of the provisions of the Act.

56. CEMENT & STEEL (for civil works only)

(This clause is deleted & not applicable for this tender)

57. REGARDING WEIGHT OF MATERIALS SUPPLIED BY THE MUSEUM/CENTRE (for civil works only)

(This clause is deleted & not applicable for this tender)

58. RETURN OF STEEL (for civil works only)

(This clause is deleted & not applicable for this tender)

59. CEMENT CONSUMPTION (for civil works only)

(This clause is deleted & not applicable for this tender)

60. CONCEALED R.C.C. BEAMS/LINTELS (for civil works only)

If in R.C.C. slab extra bars or steel cage is provided to act as a lintel or beam over an opening, the same will be measured as slab and not as beam/lintel. If in case of R.C.C. wall, extra bars or steel cage is provided to act as a lintel or beam over an opening, the same will be measured as wall and not as lintel/beam. R.C.C. column integrated in shear wall shall be measured as wall if of same thickness, and as R.C.C. column if its thickness is more than that of shear wall.

61. PROJECTION (for civil works only)

Slab projection from the face of wall/column shall be measured under item R.C.C. work in slabs and not under item R.C.C. work in chajjas.

62. DRIP GROOVE (for civil works only)

The Successful e tenderer shall provide drip groove at all ends of slabs/lintels/beams, if required, to protect rain water from entering inside the boundary of the structure, within quoted rates of R.C.C. work.

63. PLASTERING ON RCC SURFACE (for civil works only)

Wherever R.C.C. surface are to be plastered to bring it in line with the brick and/or stone wall plaster of the same mix, payment for such plaster, will be made under the item of plastering only irrespective of the fact whether there is any increase due to odd or even surface of brick or stone work below and/or adjoining it.

64. M.S. REINFORCEMENT (for civil works only)

Rate quoted for placing in position and fabrication of mild steel/ribbed tor/TMT steel reinforcement should include for straightening and cleaning including removing the rust of the bars at works site, cutting, cranking, hooking hoisting at required levels, cost of providing binding wire of 18 to 20 SWG etc. complete and no separate payment will be made on this account. Payment for reinforcement, however, to be considered on the basis of measurement as per drawing plus standard laps actually provided at site, plus chairs and spacing bars allowed by the Engineer.

65. BRICK WORK (for civil works only)

Rate shall include for tapering of bricks over column footings, over walls, steps, etc. and for exposed brick work, or any other work. Rate for brick work also includes work in pillars and small horizontal courses.

66. BRICK WORK(S) HEIGHTS/DEPTHS (for civil works only)

The height or width of foundation steps and superstructures will be measured as per actuals. The successful e tenderer shall use suitable bricks and adjust the thickness of mortar joints to make up the widths or heights as per drawings, with due regard to size of brick available.

67. EARTHWORK

The measurements of earthwork in trenches for foundation, sewer lines etc. shall be made according to the section of trenches shown on the drawing. The successful e tenderer shall include in his rate excavating for stepping and slopping back, working space for workmen as found necessary on account of condition of soil. Excavation so made in excess shall not be measured & paid for.

Place:

(Format for Declarations & Undertaking to be typed on bidder agency's letterhead and to be submitted in Part –I (TECHNICAL ENVELOPE) of the e-tender document)

DECLARATION -1

This is to certify that neither I/we/any of us is in anyway related to any employee in the National Council of Science Museums, Kolkata, or any of its constituent units.

Date:	(Signature of the tenderer) with company seal/rubber stamp
Place:	with company seal/rubber stamp
<u>DECLARAT</u>	<u> </u>
•	t quoted any extra condition along with the Part-II quoted rate is inclusive of applicable GST& LC
Date:	(Signature of the tenderer) with company seal/rubber stamp
Place:	with company scanrabber stamp

UNDERTAKING

This is to certify that I/We have carefully gone through the drawings/specifications, etc. given in the e-tender document & have clearly understood the site working conditions, time schedule given and have accordingly quoted my balanced rates after going through all details.

I/we hereby give an undertaking that I/we shall carryout the work strictly as per the given specifications, and shall complete the same within the stipulated time frame.

I/we also undertake that the EMD amount payable shall be either transferred online or the physical EMD instrument shall be deposited by me/us at the office of the Birla Industrial and Technological Museum inviting the e-tender before the bid opening date, otherwise Birla Industrial and Technological Museum may

reject the bid and also take action to withdraw my/our enlistment or debar me/us from furthe	•
tenders of NCSM or its constituent units.	
Date:	

(Signature of the tenderer) with company seal/rubber stamp

DETAILS TO BE FURNISHED FOR **SIMILAR COMPLETED WORKS** DURING LAST SEVEN YEARS ENDING PREVIOUS DAY OF THE LAST DATE OF SUBMISSION OF TENDERS

SI. No.	Details	Work -1	Work -2	
1 1	Project name & Location:			
2	Owner or client: (Name and Address,			
~	contact Number of			
	Officer to whom reference can be made)			
3	Project description:			
	1. Type of work:			
	2. Total Area/Length (in sq. mts/mts):			
	3. Information to illustrate the attention to detail			
	Landscape & Horticulture quality (close up			
	photographs):			
4	Whether For Government/Semi Government/			
	Government undertaking/ Government autonomous			
	bodies/Otherwise : Please Mention			
5	Tendered Project Cost:			
6	Actual Project Cost:			
7	Whether the agency has specific experience			
	in following types of works. Please provide			
	details of works carried out with clients'			
	name, cost of work, completion period,			
	testimonials etc.			
	a. Horticulture.			
0	b. Landscape			
8	Project duration (as per contract): (in months)			
9	Start date (dd/mm/yy):			
10	Actual date of Completion (dd/mm/yy):			
11	Actual duration (Months):			
12	Reasons for delay (if any):			
13	Any penalty/ Bonus:			
14	Any litigation/Arbitration/claim/Dispute			1
14	pending (with details of claim and award if			
	any):			
	any).			

Note:

- 1) Attested scanned copies of initial **Work Order and Completion certifica**te from client **must** be uploaded.
- 2) The certificate shall mention Name of work, Work order value, duration, Client name & Address, Location of work, Stipulated start and completion date, Actual Start and Completion date, Reasons for Delay (if any), Nature of Work etc.
- 3) Attach Photographs of the projects.
- 4) Attach separate sheets, if required

I/We certify that above information furnished by me/us is true and correct to the best of my information and knowledge.

N.B: Attested copies of credentials/testimonials must be uploaded on CPP portal.

(Signature of the Applicant & date) with company seal/rubber stamp

INFORMATION ABOUT ONGOING SIMILAR WORKS:

SI. No.	Details	Work -1	Work -2	
1	Project name & Location			
2	Owner or client: (Name and Address, contact Number of Officer to whom reference can be made):			
3	Project details in brief:			
4	Stipulated start date			
5	Actual Start date			
6	Time period			
7	Stipulated completion date			
8	Present Status of work in Percentage completion:			
9	Work Order Value (in lakhs)			
10	Work done value (RA bill) of work (in lakhs):			
11	Type/nature of works details			
12	Slow progress, if any and Reasons for Delay, if any:			

Note:

- 1) Original or attested scanned copies of initial work order from client to be uploaded.
- 2)The certificate shall mention Name of work, Work order value, duration, Client name & Address, Location of work, Stipulated start and completion date, Actual Start and Completion date, Reasons for Delay (if any), Nature of Work etc.
- 3)Attach Photographs of the projects.
- 4)Attach separate sheets, if required

I/We certify that above information furnished by me/us is true and correct to the best of my information and knowledge.

(Signature of the Applicant & date) with company seal/rubber stamp

(Affidavit to be submitted by the Agency on a non-judicial stamp paper of value Rs. 100/- duly notarized, in the Portal as well as hard copy to the TIA)

					A	FFID	AVIT						
Ref:										Da	ite:		
I/	We						,	S/o					
Residen	t	of											
Contract	tor /	Partne	r or	sole	Proprieto	or (s	trikeout	which	is	not	applicab	le) o	f firm
M/s			do h	ereby	solemnly	affiri	ms and	declare	tha	at our	Individu	ıal /	Firm /
Compar	nies is	not blac	klisted	by an	y State / C	entra	l Govt. I	Dept. Or	any	PSUs.			
												DEPC	NENT
								Ad	dres	s:			
Place :													
Date :													

Special Terms and Condition:

To be noted by Contractors at the time of e-tendering.

- 1. The percentage rates quoted by the contractors shall be considered as balance rate and considering the maintenance period of 1(one) year from the date of virtual completion of work including manpower and required materials.
- 2. Water and Electricity required for the construction work shall be arranged by the Contractor at their own cost as well as the security arrangement for the safety of martials during the entire period of landscaping and horticulture work. The source of power supply and water supply if provided from the Centre will be on chargeable basis.
- 3. Tenderers are requested to inspect the site of work before quoting their rates.
- 4. Tenderers are requested to get clarification of drawings and specification, if required, from BITM office before quoting.
- 5. For successful completion of the item of work of our Schedule/BOQ, if any other accessories, equipment, ancillary work etc. is required to be done or is involved, no extra payment will be made on account of this. The payment will be done as per the net rate of the item quoted.
- 6. Tenderer/Bidder should inspect the type and nature of earth/soil condition at the site. No extra claim will be entertained for the item of earthwork or item of work involving earthwork or work underground or below Natural ground level by digging earth (soil, rubbish, garbage, heterogenic garbage, non-decomposing material etc.) at the site, if any.
- 7. All other conditions will be referred as per our General Conditions of Landscape and Horticulture work.
- 8. All the damages, if any done to any existing facility/structures, the same has to be made good and brought back to its original state by the successful tenderer. No payment will be allowed for it.
- 9. All the safety provision required in the work is to be taken by the successful contractor. Successful Contractor should provide all the necessary safety equipment/accessories like hand gloves, rain coat, face musk, gumboot etc. to its workmen during execution of works as the requirement. Compliances of all the labour laws, Insurance for the workmen/labour and/or third party insurance etc. shall be the sole responsibility of the successful contractor.
- 10. The quoted rates shall be inclusive of all taxes & duty including GST, LW Cess, cost of all material & accessories for erection, connections, testing, required labour including skilled manpower for execution and supervision of the work; tools, tackles, plant & machineries required for the work including their transportation; etc. All contingencies, breakage, wastage, sundries, etc. complete shall also be taken care of in the quoted rates.
- 11. The drawings attached are for tender purpose only and are subjected to change/modification as per design/site condition.
- 12. The bidders must submit analysis of rates of the major items of works in support of Justification of their quoted rates if asked for by the tender inviting authority before deciding on award of work.
- 13. The Contractor shall submit the Bar chart/ Planning Schedule of the project before start the work.
- 14. The contractor shall protect and guard all electric, telephone or any other cables, pipe drains, or any other underground service lines during excavation and any damages done to such connections shall be made good at his own cost.

- 15. The contractor shall have to construct temporary site Office including temporary toilet, sewerage lines, septic tank and soak pit as required size including furniture like Table, Chair & small Steel almirah as required at his own cost for BITM Officials. The contractor may construct the temporary accommodation of his labour & store for materials at his own cost. All temporary structures to be constructed by the contractor at his own cost and to be dismantled within one (01) month from completion date of the work and would clean the entire plot.
- 16. The successful tenderer shall deploy full time qualified and experienced Horticulturist at site during the entire tenure of the Contract. Necessary documents to be submitted in support of the above man power. No extra payment shall be made for the deployment. The cost of required manpower is inclusive of the tender rate of the contractor.

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GENERAL CONDITIONS OF LANDSCAPE & HORTICULTURE WORKS

- The contractor has to furnish all the materials, labour, manure, plants, pesticides, barricading etc. related items, necessary to complete the work indicated on drawing and specified here in.
- The price quoted shall be fixed for the duration of the contract and should be inclusive of all taxes, duties and other levies.
- Final schedule of work has to be strictly adhered to.
- Necessary phasing of work may be done based on time schedule and site conditions.
- No isolated clause should delay the schedule.
- The contractor has to arrange necessary water for the plantation work and maintenance for a further period of 1 (one) year from the virtual completion of landscape & horticulture work.
- The contractor has to tender their rate considering the cost of plantation work and the maintenance cost of 1 (one) year, i.e. inclusive the of engagement of man power for the maintenance period as well as replacement of dead plants/ unhealthy plants/using manure & pesticides / watering / weeding, barricading etc. to make the area in tip-top condition at their own cost. For the maintenance of the period of 1(one) year, no extra cost shall be paid to the contractor.

LAWN

Land development and preparation

The scope of work shall be filling, compacting dressing levelling with proper weeding, pulverizing of soil, clearing brick bats, breaking clods, rolling and preparing the land area for grass plant.

MATERIALS

Plant materials:

- Plant materials shall be well formed and shaped true to type, and free from diseases, insects and defects such as knots, windburn, injury, abrasion or disfigurement.
- All plant materials shall be healthy, sound, vigorous, free from diseases, insect pests, or their eggs, and shall have healthy, with well-developed root systems. All plants shall be hardy under climatic conditions similar to those in the locality of the project. Plants supplied shall confirm too the names as mentioned in the plans and in the plant, list supplied in the Bill of Quantities. Plant material will not be accepted if branches are damaged or broken. Material must be protected from the sun and weather until planted.
- Any nursery stock shall have been inspected and approved by consultant/ engineer or his nominated representative.

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- All plants shall conform to the requirements specified in the plant list, except that plants larger than specified may be used if approved, but use of such plants shall not increase the contract price. If the use of the larger plant is approved, the spread of roots or ball of earth shall be increased in proportion to the size of the plant. If smaller plants are supplied instead of specified heights in the plant list, the price will get reduced proportionately depending upon the plant species and decision of the engineer/consultant or his nominated representative.
- To deliver plants with legible identification labels.
- All plant height mentioned in the plant list refers to the visible height above the ground level.

Topsoil:

- PH range 6.5 to 7.5. Organic Carbon level of 0.5%, medium to high rating of available Phosphorus & Potassium is desirable.
- Topsoil or good earth shall be a friable loam, typical of cultivated top soils of the locality (not exceeding 15cms. from G.L) containing at least 2% of decayed organic matter (humus). It shall be taken from a well-drained arable site. It shall be free of subsoil, stones, earth clods, sticks, roots or other objectionable extraneous matter or debris. It shall contain no toxic material. No topsoil shall be delivered in a muddy condition. Earth measured in stacks will be reduced by 20% by volume for payment.

Fertilizer:

• Dry farm yard manure shall be used for the measurement in stacks, with 8% reduction by volume for payment. It shall be free from extraneous matter, harmful bacteria insects or chemicals.

Leaf Mould:

• Well-decomposed leaf mound made from withered dry leaves and garden sweeping; (Bamboo, Tamarind and Casurina leaves should be avoided) which are required be powdered and shifted through wire meshes, shall be used. Measurement shall be in stacks, with 20% reduction by volume for payment. It shall be free from extraneous matter, harmful bacteria, and insects or chemical.

Root System:

• The root system shall be conducive to successful transportation. Where necessary, the root-ball shall be preserved by support with Hessian or other suitable material. On soils where retention of a good ball is not possible, the roots should be suitably protected in some other way which should not cause any damage to roots.

Condition:

Trees and shrubs shall be substantially free from pests and diseases, and shall be materially
undamaged. Torn or lacerated roots shall be pruned before dispatch. No roots shall be subjected to
adverse conditions, such as prolonged exposure to drying winds or subjection to water-logging,
between lifting and delivery.

Supply and substitution:

• Upon submission of evidence that certain materials including plant materials are not available at time of contract, the contractor shall be permitted to substitute other material and plants, with an equitable adjustment of price. All substitutions shall be of the nearest equivalent species and variety to the original specified and shall be subject to the approval of the engineer/ consultant or his nominated representative.

Packaging:

• Packaging shall be adequate for the protection of the plants and such as to avoid heating or drying out

Marking:

Each specimen of tree and shrub, or each bundle, shall be legibly labeled with the following particulars

- Its name
- The name of the supplier, unless otherwise agreed.
- The date of dispatch from the nursery.

TREE PLANTING

Trees should be supplied with adequate protection as approved. After delivery, its planting is not to be carried out immediately, balled plants should be placed cheek to cheek and the ball covered with sand to prevent drying out. Bare-rooted plants can be heeled in by placing the roots in a prepared trench and covering them with earth which should be watered to avoid air pockets round the roots.

Digging of Pits:

- Tree pits shall be dug a minimum of three weeks prior to backfilling. The pits shall be 90cm in diameter and 100cm deep. It shall be replaced with soil mixture as specified further herein.
- The bottom of the pit shall be forked to break up the-sub-soil.

Backfilling:

- The pit shall be refilled with 200 mm red earth/murram at the base and the rest 700 mm with good black garden soil mixed with manure 2:1 volume (2 parts of stacked volume of earth after reduction 20% by volume: 1 part of stacked volume of manure after reduction by 8% by volume.).
- The soil backfilled watered through and gently pressed down a day previous to planting to make sure that it may not further settle down after planting. The rest 100 mm shall be filled with leaf mould. The soil shall be pressed down firmly by treading it down, leaving a shallow depression all around for watering.

Planting:

- No tree pits shall be dug until final tree position has been pegged out for approval by the consultants or his nominated representative. Care shall be taken that the plant sapling when planted is not buried deeper than in the nursery, or in the pot.
- Planting should not be carried out in waterlogged soil.
- Plant trees at the original soil depth; the soil marks on the stem is an indication of this and it should be maintained on the finished level, allowing for settling of the soil after planting. All plastic and other imperishable containers should be removed before planting. Any broken or damaged roots should be cut back to sound growth.
- The bottom of the planting pit should be covered with 50 mm to 75 mm of soil. Bare roots should be spread evenly in the planting pit; and small mound in the center of the pits on which the roots are placed will aid an even spread. Soil should be placed around the roots, gently shaking the tree to allow the soil particles to sift into the root system to ensure close contact with all roots and to prevent air-pockets. Backfill soil should be firmed as filling proceeds, layer by layer, care being taken to avoid to avoid damaging the roots, as follows:

• 25 gms. of 50% BHC shall be sprinkled on walls of pit, and initially pit shall be filled to 200 mm. depth with earth mixed with 10 gm of BHC. The balance earth shall be filled in a mixture of 1:2 (1 part manure to 2 part earth). Aldrin or equivalent shall be applied every 15 days in a mixture 0.2% which comes to 6 cc in 1 litre of water.

Staking:

Newly planted trees must be held firmly although not rigidly by staking to prevent a pocket forming around the stem and newly formed fibrous roots being broken by mechanical pulling as the tree rocks. Methods:

The main methods of staking shall be

- A single vertical stake, 900mm longer than the clear stem of the tree, driven 600 mm to 900 mm into the soil.
- Two stakes as above driven firmly on either side of the tree with a cross-bar to which the stem is attached. Suitable for bare-rooted or balled material.
- A single stake driven in at an angle at 45deg and learning towards the prevailing wind, the stem just below the lowest branch being attached to the stake. Suitable for small bare-rooted or balled material.
- For plant material 3 m to 4.50 m high with a single stem a three-wire adjustable guy system may be used in exposed situations.

The end of stake should be pointed and the lower 1.0 m to 1.20 m should be coated with a non-injurious wood preservative allowing at least 150 mm above ground level.

Tying:

• Each tree should be firmly secured to the stake so as to prevent excessive movement. Abrasion must be avoided by using a buffer, rubber or hessian, between the tree and stake. The tree should be secured at a point just below its lowest branch, and also just above ground level; normally two ties should be used for tree. These be adjusted or replaced to allow for growth.

Watering:

• The contractor should allow for the adequate watering in of all newly planted trees and shrubs immediately after planting for survival and healthy growth of the same and he shall during the following growing seasons, keep the plant material well-watered.

Manuring and Fertilizing

Fertilizing shall be carried out by application in rotation of the following fertilisers, every 15 days from the beginning of the monsoon till the end of winter:

Manures:

Two types of manures could be used

- Bulky organics like F.Y.M., well rotten Cow dung, Rate of application 7.5 Kg/Sq.m. or more.
- Sterilized high analysis manure like Sudha Susam, Sterameal etc. Rate of application 150 g/sq.m. or more.

Fertilizers:

- A general recommendation could be made. Application range is indicated below:
- Nitrogen (N) 3 -10 g/sq. m Basal + Side dressing

- Phosphorus (P2O5)
 Potassium (K2O)
 2 5 g/sq. m. Basal
 2 5 g/sq. m Basal
- Foliar application of micronutrients like Zinc, Boron, Molybdenum etc. and other macro-nutrients like Sulphur, Magnesium and Iron etc. would be required.
- Application of differentiation chemicals, growth promoters etc. at specific stages of growth of different types of plant would be helpful. All shrubs which are supplied pot grown shall be well soaked prior to planting.
- Watering in and subsequent frequent watering of summer planted container grown plants is essential. The work would be considered to be completed after settling of saplings upto a maximum of two weeks of planting.

SHRUB PLANTING IN PLANTERS AND BEDS

- All areas to be planted with shrubs shall be excavated, trenched to depth of 750 mm, refilling it with finely mixed good black garden soil and excavated earth (after breaking the clods and mixing with sludge in the ratio 8:1(8 parts of stacked volume of earth after reduction by 20% by volume :1 part of stacked volume of sludge after reduction by 8% by volume).
- Tall shrubs may need staking: which shall be provided as approved by the consultant or his nominated representative depending upon the conditions of individual plant specimen.
- For planting shrubs and ground cover shrubs in planters, good earth shall be mixed with sludge in the proportion as above and filled in planters. Positions of shrubs to be planted should be marked out in accordance with the planting plan. When shrubs are set out, precautions should be taken to prevent roots drying. Planting holes 40 cm dia. and 40 cm deep should be excavated for longer shrubs. Polythene and other non-perishable containers should be removed and any badly damaged roots carefully pruned. The shrubs should then be set in holes so that the soil level, after settlement, will be at the original soil mark on the stem of the shrub. The hole should be backfilled to half pots depth and firmed by treading. The remainder of the soil can then be returned and again firmed by treading.

GRASSING

The work would be considered to be completed after settling of saplings up to a maximum of two weeks of planting.

Preparation:

- During period prior to planting the ground shall be made free from weeds.
- Grading and final levelling of the lawn shall be completed at least three weeks prior to the actual sowing.
- Regular watering shall be continued until sowing by dividing the lawn area into proportions of approx. 5 mt square by constructing small bunds to retain water. These 'bunds' shall be levelled just prior to sowing of grass plants. At the time of actual planting of grass, it shall be ensured that the soil has completely settled.

Soil:

• The soil itself shall be ensured to the satisfaction of consultant or his nominated representative to be some good fibrous loam rich in humus.

Sowing the grass roots:

- Grass roots from a grass patch, should be seen and approved beforehand. The grass roots stock received at site shall be manually cleared of all weeds. And water sprayed over the same after keeping the stock in a place protected from sun and dry winds.
- Grass stock received at site may be stored for maximum of three days. In case grassing for some areas is scheduled for a later date fresh stock of grassroots shall be ordered and obtained.

Execution:

• Small roots will only be dibbled about 5.0 cms. apart into the prepared grounds. Grass areas will only be accepted as reaching practical completion when germination has proved satisfactory and all weeds have been removed.

Maintenance:

- As soon as the grass is approximately 3 cm high it shall be rolled with a light wooden
- roller in fine, dry weather- and when it has grown to 5 to 8 cms above the ground, weeds must be removed and regular cutting with the scythe and rolling must be begun. A top-dressing of farmyard manure to the square yard or well decomposed well broken sludge manure shall be applied when the grass is sufficiently secure in the ground to bear the moving machine, the blades must be raised an inch above the normal level for the grass could be cut so that it is from 4 to 5 cms in length.
- In the absence of rain, in the monsoon the lawn shall be watered with sprinklers every, three days soaking the soil through to a depth, of at least 8 cms.
- Damage, failure of dying back of grass due to neglect of watering especially for seeding out of normal season shall be the responsibility of the contractor.
- Any shrinkage below the specified levels during the contract or MAINTENANCE period shall be rectified at the contractor's expense.
- The work would be considered to be completed after setting of grass roots within two weeks of grassing and thereafter free maintenance would be application for the time period mentioned the contract: The contractor's responsibility is to ensure a good lawn with uniform growth of grass over the entire end, free from weeds and absolutely green with as patch of bare earth visible, including supply of necessary manner or good earth (for top dressing) as may be required.

Rolling:

• Lawn mower with roller shall be used periodically, taking care that the lawn in not too wet and sodden.

Edgings:

• These shall be kept neat and must be cut regularly with the edging shears.

Fertilizing:

• The lawn shall be fed once a month with liquid manure prepared by dissolving 45 cc of ammonium sulphate in one litres of water.

Watering:

• Water shall be applied at least once in three days during dry weather. Water whenever done should be through and should wet the soil at least in to a depth or 20 cms.

De-weeding

• Prior to regular mowing the contractor should carefully remove rank and unsightly weeds.

MAINTENANCE FOR 1(ONE) YEAR AFTER VIRTUAL COMPLETION OF WORK

The landscape contractor shall maintain all planted areas within the landscape contract boundaries for one year after the area is handed over in whole i.e. after virtual completion of the work. Maintenance shall include replacement of dead plants, watering, weeding, cultivating, control of insects, fungus and other diseases by spraying with an approved insecticide or fungicide, pruning, and other horticulture operations necessary for the proper growth of the plants and for keeping the landscape contracts area neat in appearance.

Pruning and repairs

Upon completion of planting work under the contract all trees should be pruned and all injuries
repaired where necessary. The amount of pruning shall be limited to the minimum necessary to
remove dead or injured twigs and branches and to compensate for the loss of roots and the result of
transplanting operations. Pruning shall be done in such a manner as not to change the natural habit or
special shape of the trees.

Nursery Stock:

• Planting should be carried out as soon as possible after reaching site. Where planting must of necessity be delayed, care should be taken to protect the plants from pilfering or damage from people or animals. Plants with bare roots should be heeled-in as soon as received or otherwise protected from drying out, and others set closely together and protected from the wind. If planting is to be delayed for more than week, packaged plants should be heeled-in as soon as received or otherwise protected from drying out, and others set closely together and protected from the wind. If planting is to be delayed for more than week, packaged plants should be unpacked, the bundles opened up and each ground of plants heeled in separately and clearly labeled. If for any reason the surface of the roots becomes dry the roots should be thoroughly soaked before planting.

Protective fencing:

• According to local environment shrubs shall be protected adequately from vandalism until established.

Completion:

• On completion the ground shall be formed over and left tidy before commencement of maintenance.

Maintenance guidelines:

- Application of manure, bone-dust, horn-meal, leaf-mould insecticide, pesticide etc. with appropriate quantity at the time of transplantation of saplings and plants as required for the healthy growth of the trees.
- Spraying of weedicide Round up or equivalent by nap-sack sprayer by mixing 1 part of weedicide with 9 parts of water (15 20 cc / litre of water).
- Mulching/weeding after 30 days of transplantation which includes removal of weeds and application of fertilizers as available.
- Gap filling of the plants which die in between by carrying from the site.
- Second mulching/weeding after 3 months of plantation which includes removal of weeds and pulverisation of soil for root aeration.
- Watering the plants as and when required (before the moisture goes below field capacity) from available source at site
- Application of chemical manure, bio-fertilizer, foliage spray etc. as required for healthy growth of the trees. Normally 3 times in a life cycle and once in a year for the permanent dwarf shrubs). Immediate irrigation to be followed after application of the above-mentioned materials.
- Pruning of hedge to desired shape, size, height with hedge shear.

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