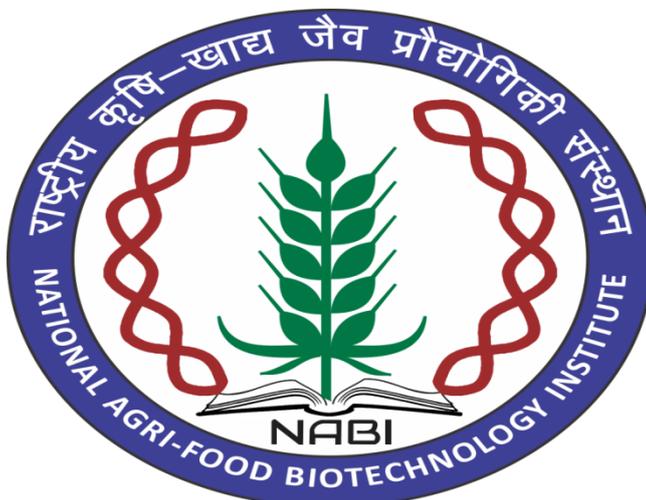


Volume-II

NATIONAL AGRI-FOOD BIOTECHNOLOGY INSTITUTE (NABI)

(Department of Biotechnology,
Ministry of Science and Technology, Govt. of India)
Knowledge City, Sector-81, SAS Nagar, Mohali, Punjab

FINANCIAL BID DOCUMENT



**Minor civil works in Animal House at Main Campus,
NABI, Knowledge City, Sector-81, Mohali**

TECHNICAL SPECIFICATIONS

1.0 STANDARD SPECIFICATIONS TO BE FOLLOWED

The work should be executed as per following CPWD specification and also the specification laid in tender document. In case, above specifications are not available for certain item, then the material should conform to ISI and BIS standards.

1.1 Civil Engineering Works

CPWD Specification 2009 Vol. I & II along with latest correction slips. These Specifications have replaced CPWD Specifications 1996 along with Correction Slips issued on them. These Specifications cover all types of Works. The specifications are available as a printed document issued by CPWD and also in soft copy PDF Format in CPWD website.

1.2 Electrical Engineering Works

- (A) CPWD General Specifications for Electrical Works Part I Internal - 2013.
- (B) CPWD General Specifications for Electrical Works Part II External - 1994.
- (C) CPWD General Specifications for Electrical Works Part IV Sub Stations – 2013.

The above specifications shall be read with upto date correction slips (if any).

(A) CIVIL WORKS

WORKMANSHIP FOR THE ENTIRE PLUMBING WORK.

The workmanship shall be best of its kind and shall conform to the specifications, as below or Indian Standard Specifications in every respect or latest trade practices and shall be subject to approval of the Engineer-in- Charge. All materials and/or Workmanship which in the opinion of the Engineer-in- Charge is defective or unsuitable shall be removed immediately from the site and shall be substituted with proper materials and/or workmanship forthwith.

WARRANTY AND HANDOVER

The Contractor shall warrant that all plant, materials and equipment supplied and all workmanship performed by him to be free from defects of whatsoever nature before handover to the Engineer-in-Charge. All the Guarantee/Warranty certificates of all the items shall be in the name of Institute i.e., National Agri-Food Biotechnology Institute (NABI), Mohali.

HANDING OVER OF DOCUMENTS

All testing and commissioning shall be done by the Contractor to the entire satisfaction of the Engineer-in- Charge and all testing and commissioning documents shall be handed over to the Engineer-in-Charge.

NOTE: In case of any contradiction between the specifications, the contractor shall take the prior approval of the Engineer- In - Charge before executing the same at site.

LIST OF MAKES TO BE ADOPTED

S.No	Item	Make
1.	Cement	J K Lakshmi/ ACC/ Ultratech/ Ambuja
2.	Polycarbonate sheet	Durotuff/Lexan/GE/Bayer Makrolon
3.	Vitrified tiles	Johnson/Kajaria/Nitco/Somani

Note:- Any other material make not mentioned above shall be ISI marked & got approved from Engg-in-charge

BOQ of Civil works related to additions in Animal House Building

S.No.	Description.	Unit	Qty	Rate (In INR)		Amount
				In words	In figures	
<u>1</u>	Earth work in excavation by mechanical means(hydraulic excavator)/manual means in foundation, trenches of drains(10 sqm. on plan), including dressing of sides and ramming of bottoms lift , including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m.					
	Qty in cum.	cum	17.000			
<u>2</u>	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5 m.					
-						
	total in cum	cum	17.000			
<u>3</u>	Providing & laying in position cement concrete of specified grade excluding the cost of centering and shuttering –All work upto plinth level.					
-	1:5:10 (1cement: 5 coarse sand: 10 graded stone aggregate 40 mm nominal size).					
	Qty in cum	cum	1.7000			
4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
	All works upto plinth level (1:2:4)					
		cum	3.910			
5	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.					
	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kgs	150.000			

<u>6</u>	Centering & shuttering including strutting, propping etc. and removal of form for:-					
	Columns, Pillars, Piers,Walls , Abutments, Posts and Struts.					
		sqm	34.000			
<u>7</u>	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth, above plinth in:					
	Cement mortar 1:4 (1 cement : 4 coarse sand)					
	Qty in cum.	cum	1.500			
<u>8</u>	15 mm cement plaster on the rough side of single or half brick wall of mix : 1:4 (1 cement: 4 fine sand)					
		sqm	34.00			
<u>9</u>	Finishing walls with textured exterior paint of required shade:- New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm	sqm	45.00			
<u>10</u>	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat, steel painting of two or more coats of approved steel primer all complete.					
		Kg	92.00			
<u>11</u>	Providing & fixing aluminium work for aluminium profiles with extruded built up section and other sections of approved make conforming to IS:733 and IS: 1286, fixing with dash fasteners of required dia and size, including necessary fitting up the gaps at junctions i.e. at top, bottom and sides with required EPDM rubber/neoprene gasket etc. Aluminium sections shall be smooth, rust free straight, mitred and jointed mechanically wherever required including cleat angle. Aluminium snap beading for glazing/paneling, C.P. brass/stainless steel screws, all complete as per					

	architectural drawings and the directions of Engineer-in-charge.					
	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	Kg	10.00			
12	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge					
	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	cum	2.00			
13	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.	sqm	100.800			
	Size of Tile 600x600 mm					
14	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, walls over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc. complete including any cost of removal of existing paint, plaster etc.					

	Size of Tile 600x600 mm	sqm	95.700			
15	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying steel primer of approved colour , two or more coats of steel paint including welding and bolted with special shaped washers etc. complete.					
	Hot finished welded type tubes	sqm	145.00			
16	Providing & fixing of 3 mm solid polycarbonate Sheet of approved colour , opaque properties, both side UV resistant approved by the Engineer-in-charge & fixed complete in all aspects including cost of sealing wall/sheet gaps with silicon, closing edges with suitable gaskets, fastners etc (MS frame/aluminium shall be paid separately)	sqm	9.000			
17	Providing and fixing of room name plates made of 3 mm thick white acrylic sheet with maroon coloured text plotter cut in vinyl over base white sheet. The cost should be inclusive of fixing charges with suitable acrylic sheet to glass adhesive/transparent tape ,covering backside with vinly sheet, labour, wastage, SS chain for hanging, if required etc.	sft	72.000			
18	Providing and fixing of 5.5 mm thick float glass (weight not less than 13.50 kg/sqm) in doors, sliding windows, ventilator etc. Ths cost should include cost of EDPM beading, silicon sealing, gaskets etc.	Sqm	4.500			
19	Extra for providing frosted glass panes 5.5 mm thick instead of ordinary float glass panes 5.5 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).		4.500			
20	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	12.00			
	Sub- Amount					
	Un-conditional rebate/discount					

Grand Total Amount (Inclusive of GST, taxes, labour etc)					
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NOTE: - Payment shall be released item wise based on actual measurement examined at site by Engineer- In- Charge. Rate quoted shall be deemed to be inclusive of GST/other taxes.

Signature/Stamp of Bidder