# TWO BID SYSTEM TECHNICAL BID WILL BE OPENED ON 09 NOV 2020 AT 1130 HRS COMMERCIAL BID WILL BE OPENED ON : 11 NOV 2020 AT 1130 HOLRS PRICE NEGOTIATION WITH L-1 BIDDER ON 13 NOV 2020 AT 1130 HOURS

Tele : 0532-2420772 E-mail : armyschoolalld@gmail.com	Army Public School New Cantt, Allahabad-	211 001
5077./Lib	18 Oct 2020	
M/S		
	- ) :	

### INVITATION OF TENDER

## CONSTRUCTION OF LIBRARY WITH PROFILE SHEET ROOFING AT ARMY PUBLIC SCHOOL, NEW CANTT, ALLAHABAD

- You are invited by the Management of Army Public School, New Cantt. Allahabad to submit tender for the above mentioned work described in the accompanying documents.
- Your tender duly completed may be put in the tender box kept in school
  administrative block on or before 07 Nov 2020 between 10:00 to 13:00 hours together
  with all relevant documents sealed in an envelope duly quoted your rates.
- 3. The following documents are included with this tender invitation:-
  - (a) Part I General Information about the Tender.
  - (b) Part II Technical Bid.
  - (c) Part III Price Bid.
  - (d) Part IV Terms & Conditions.
  - (e) Part V- Specifications of Building Work.
  - (f) Part VI Drawings of the Library.
- The Management of Army Public school, Allahabad doesn't bind itself to accept the lowest or any tender and may cancel fendering process at any time.
- Wherever there is difference between specifications and drawings, specifications will supersede the drawings.

Signature of Contractor

Signature of Principal

Army Public School, New Cantt, Allahabad

## PART I - GENERAL INFORMATION ABOUT THE TENDER

SLNo.	Tender for the work of	Construction of Library with profile sheet roofing at Army Public School, New Centt , Allahabad.
٦.	Earnest Money Deposited	Rs. 45,000/- (Rupees forty five thousand only)
2.	Date of Issue of Tender	18 Oct 2020 to 07 Nov 2020
3.	Last Date of Receipt of Tender	07 Nov 2020 by 1300 hours
4,	This Tender Contains	24 pages and Drawings including working design 04 Sheets
5.	Time allotted for work	Before 90 days from the date of issue of work order
6.	Site of the Work	Army Public School New Cantt, Allahabad

Signature of Contractor

	Contract of the contract of th	3
i.	Name of the firm	7 . A
2.	Address of the head/ registered / branch office	
3.	Phone no. & fax No	
4.	Email address	
5.	Mobile na	
6.	PAN NO.	(Enclose Proof)
7.	GSTN NO.	(Enclose copy of Registration)
8.	Registered with govt, agencies	(Enclose Proof)
9.	Your bank account no.	
10.	Name & address of bank	*
11.	Category of trade	
12.	Name of the partners / propriator	7
13.	Exparience in years in the respective trade(attach work orders executed in past two years)	
14.	Single work order during the last two financial years	
15.	Payment details (earnest money)	Draft no date

#### CERTIFICATE

In consideration of my being contractor, I hereby agree that I shall not withdraw, amend or attach any conditions to my tenders submitted to the school authorities before Oct 2020 from the date of issuing work order. Said tenders of acceptance, and I do so; the Principal Army Public School, New Cantt, Allahabad shall be entitled to forfeit our earnest money deposit along with the tender and remove us from the school work contract without prejudice to any other right or remedy by school for such breach on our part.

## DECLARATION

25-24-14-14-24-14-14-24-14-14-14-14-14-14-14-14-14-14-14-14-14	(Proprietor/ Partner/Manager) do here by
declare that the entire declaration made in the	application form is true to the best of my
knowledge. [NOTE: - If there any changes in the	construction of working of firm, the affecting
accuracy of the answer now given, should be pro-	omptly communicated to The Principal, Army
Public School New Cantt Allahabad	

Date :

Signature of Contractor With rubber stamp

## PART II - TECHNICAL SPECIFICATIONS

## CONSTRUCTION OF LIBRARY WITH PROFILE SHEET ROOFING AT ARMY PUBLICSCHOOL, NEW CANTT ALLAHABAD

SI. No	ITEMS OF WORKS
MV.	Excavation of foundation trenches of required size and shape with all tools and plants for proper completion of work as per the drawing, details & specification.
2.	Providing & applying antitermite treatment in foundation trenches, Plinth. Apron etc. as per the drawing, details & specification by the Architect.
3.	Providing & Preparation of foundation bed of required size and shape in PCC 1:4:8 type D-2 (1 Cement: 4 course sand: 8 – 40 mm size stone Aggregate) as per the drawing, details & specification. Plinth level from earth level will be minimum 1.5 ft / or as decided by the school authority.
4.	Providing and cutting bending and placing fixing of all types of mild steel TMT reinforcement bars for foundation, columns all types of beams, slabs. Chajjas etc. as per the drawing details & specification.
5.	Providing and casting of 40 mm thick D.P.C. with recommended water proof chemical in PCC 1:2:4 type B-0 as per the drawing, details & specification.
6.	Providing, preparation and casting of all type of R.C.C. work in M-25 concrete (design mix) for the foundations. Beams, Columns, Slabs, Chajjas etc. with all tools and plants for proper completion of work, as per the drawing, details, direction and specification.
7.	Provide and construct 230 mm thick wall with 1:8 cement & sand mortar and 115mm thick brick wall with 1:4 cement & sand mortar in first class locally available bricks, where required as petthe drawing, details, direction and specification.
8.	Providing and fixing mild steel angle 40X40X8 mm door frame with 35mm thick waterproof iS marked flush door of approved brand with all fixture and fasteners as per the drawing, details direction and specification where applicable.
9.	Providing and fixing windows of sliding type made of Color Coated Galvanized Steel or color Coated Aluminum Windows with 8mm thick Square bar mild steel grill and 5mm thick clear transparent glass fixed and stainless steel fly/mosquito proof as per the drawing, details direction and specification.
10,	Supply and fixing of 35 mm thick factory made standard quality (ISI) flush doors with complete iron fittings of ISI /BIS marked heavy quality.

Signature of Contractor

- 11. Providing, preparation and fixing all types of form work, shuttening, scaffolding, contaring with required tools, plants and shuttering material for proper completion of work as per the drawing, details, direction and specification.
- Providing and plastering in CM 1:4 cernent & sand mortar plaster work in interior and exterior wall surfaces, columns, beams and coiling surfaces with all tools & plants for proper completion of work as per the drawing, details, direction and details specification.
- (a) Vitrified Ceramic tiles 10 mm thick (square/ rectangular) polished, area of each tiles not exceeding 0.38 sqm, in floors & wall including inside class room and verandah upto four feet height etc. set and jointed in floors etc. set and jointed in neat cement slurry and pointed in white or coloured cement to match. As per the drawing, details, direction and details specification. Make: Kajaria/Johnson/Orient Bell/Asian / Granit.
  - (b) Ceramic tiles Dado up to 1200 mm height, with dement modar 1:4 (1 cement : 4 coarse sand), finished with a floating coat of neat cement. As per the drawing, details, direction and details specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
- 14. (a) Fabrication, Supply & Fixing truss work / M.S. pipe as per design, purlins, rafters and trusses complete with priming, painting and fixing all complete. Make TATA / Coloron Plus by JSW Steel Ltd/ Resin coat on both surface @ 150 gm / sqm of coating.
  - (b) Supply and fixing of color coated Aluminum –Zinc Alloy coaled steel ( Aluminum –around 55% & Zinc -43% ) rib profile sheets of 0.50 mm thick (TCT) having effective width 1000 mm +/- 10 mm, crost 25-32 mm and 200-250 mm pitch C/c with male female side laps and antisiphoning features at male and, minimum Yield strength 550 MPA and confirming standards AS 1397 , ASTM A 792 in approved color and make including accessories such as Gutter Flashing, ridge pieces, barge boards, Crimped curves and with nylon coated self-tapping / self-drilling screws with EPDM washers etc., all works complete as per drawings, specifications and instructions of Engineer in charge . Rate includes cost of all materials against supply, Carriage Erection, Installation for roofing at all heights upto 13 00 m above from Ground level , labor, tools & plants and all other incidental charges etc complete. (Payment will be done on covered area basis which will be as per amount mentioned in price bid as overall cost of the project) as per the design, drawing, direction and details specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.

a. Fixing of Electrical Fans, LED Tube lights (as per design), six silent exhaust fans and other Light fixtures of standard quality make- Havels. Orient, Bajaj as per approved by the Architect and as per the electrical design, details, direction and detailed specification. Make and model shall be approved by the competent authority to relevant IŞ / BIS Code.
b. Providing and fixing of electrical Concealed 25mm dia P.V.C. conduits in slab, walls for electrical circuit wiring as per the electrical design, details, direction and details specification. Make and model shall be approved by the competent

authority to relevant IS / BIS Code.

- c. Providing and fixing of modular switch board boxes of approved size, shape and make at required location with proper finishing as per the electrical design, details, direction and details specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
- d. Providing, fixing and laying of modular electrical switch and multistand cooper wiring of approved make-Havels, RR cable, or standard, design, colour and size as per electrical design, details, and directions and detail specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
- e. Providing laying, connection distribution board with outdoor main electrical supply as per electrical design, details, and directions and detail specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
- f. Providing 3 phase electrical connection from overhead main line:
- g. Providing and fixing MCB, switch, socket for computers, projectors, AC,TAL, PA System, CCTV Camera etc., separate conduit wiring for Technology Aided Learning (TAL) System, Public Address (PA) System, Provision of wire connection for TV, internal wiring for CCTV Camera with socket / switches, earthing connection, as per directions of the school.
- a. Providing and painting of all exterior wall surfaces, ceiling and chajjas etc with super snowcem cement colour and all interior wall surface ceiling with all interior wall surface &ceiling with Oil bound distemper of approved colour, shade and texture with all tools plants etc for proper completion of work as per details, design, pattern, directions and detail specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - b. Providing and application of synthetic enamel paint of approved colour shade and make on M.S. angle door frame windows, grill flush door etc. as per details, design, pattern, directions and detail specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - c. Makes of OBD: Asian / Berger/ Nerolac.
  - d. Make of Snowcem: Asian / Berger/ Nerolac.
  - Make of Synthetic enamel paint : Asian / Berger/ Nerolac.

Signature of Contractor

Signature of Principal

Army Public School, New Cantt Allahabad

- 17. a) Providing and fixing 100 mm dia P.V.C. rain water pipe at given position on as per details, directions and detail specification of make: Fenolex/ Prince/ Supreme. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - b) Providing and fixing of concealed P.P.R. pipe of make: Fenolex/ Prince/ Supreme for water supply from overhead water tank to toilets, and up to drinking water out lets, of required size, shape and approved make, including supply of & fitting of all water supply accessories and fixtures, as per details, drawing, directions and detail specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - c) Providing and fixing of Fenolex or sucreme or prince made 150 mm, 100 mm, 75 mm dia P.V.C. pipe Nahani Traps. Other under floor arrangements to fix water closet, wash basins, gents and ladies urinals etc. for proper sanitation from toilets and other water log area to inspection chamber located outside the building, including supply of fixing of all sanitary accessories, if required by the user. The laying of required sewer line work is also included in the work as per details, drawing, directions and detail specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - d) Providing laying and connecting water tank with main water supply line inside the school campus (if required by the school). Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - e) Providing laying, fixing and connecting 2 Nos. 1000 liters Sintex make triple layer water tank over the terrace of toilet.(if required by the school). Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - f) Providing and constructing inspection chamber in required No. and size at recommended location as per details, drawing, directions and detail specification (if required by the school). Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - g) Providing laying, fixing and connecting 150 mm dia P.V.C. sewer line connection from outside located inspection chamber to septic tank and soak pit or existing sewer line within school premises if required by the school. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - 18. Supply of fixing two Green Boards due in Library of standard size (size to be approved by Principal APS New Cantt Allahabad at the time of execution of work). Make and model shall be approved by the competent authority to relevant IS / BIS Code.
  - All construction work as per details, drawing, directions and detail specification.

    Make and model shall be approved by the competent authority to relevant IS / BIS Code.

20.	Providing and construction 750 mm wide Plinth Protection with PCC 1:3:6 type C-2 all around the building (Apron) of required size as per details direction and specification. Make and model shall be approved by the competent authority to relevant IS / BIS Code.
21:	(a) Providing and laying 3 meters wide 60mm thick rubber moulded pre-polished interlocking tiles approach path at both end of building connected to inside campus road. Make and model shall be approved by the competent authority to relevant is / BIS Code.
	(b) The make design, color, shape, pattern of Interlocking tiles shall be approved by Architect or Engineer in charge and confirming LS/BIS. Code. Make and model, shall be approved by the competent authority to relevant IS / BIS Code.
22	List of Makes of products to be incorporated in the said works is attached as Appendix  A to this contract.

## PART III -PRICE BID

## CONSTRUCTION OF LIBRARY WITH PROFILE SHEET ROOFING AT ARMY PUBLIC SCHOOL, NEW CANTT ALLAHABAD.

SL.	DESCRIPTION OF ITEMS	UNIT	QTY.	RATE	AMOUNT
1	Surface dressing not exceeding 15 cm deep in any soil	Sqm	397,50		
2	Exc in trenches n exc 1.5m deep in soft/loose soil	Cum	31.36		77
3	Exc in trenches exc 1.5m and n. exc 3m deep in soft/loose soil	Cum	21.38		
4	Return Filling with soil obtained from exc	Cum	78.84		- 5
5	Removal of soil to a distance of exc. 50m & n.exc 100m and depositing	Cum	33.52		
6	Hard core of broken stone n. exc 63 mm size	Cum	3.42		1
7	PCC 1:4:8 Type D 2	Cum	6.57		
8	Treating the bottom and sides of excavation at the rate of 5 litres of emulsion per square metre of surface area	Sqm	86.40		
9	Treating with AT solution back fill in contact with foundation @ 7.5 litres of emulsion per sqm of vertical surface area.	Sqm	14 70		
10	Treating with AT solution top of filled earth @ 5 lit/Sqm	Sqm	170.11	- 2	. 5
11	Form work to Footings & Plinth Beams	Sam	46.96		-
12	Form work to columns upto GL	Sam	17.50	P	
13	Form work to columns upto FFL	Sqm	8.40		-
14	5mm dia and over upto and including 10mm dia in stirrups, spacers and binders	Kg.	435 50		

Signature of Contractor

	10				
15	10mm dia and above deformed CRS TMT bars upto FFL	Kg	1074.88	â.	\$ F.
18	RCC M25 in col, Footing, Pedestals, Plinth Beams etc.	Cum	11:03	12	
17	RCC M 25 in columns upto FFL	Cum	0.74		
18	Brick work in CM 1:6 upto FFL	Cum	22.66		
19	Form work to columns upto Roof Slab	Sqm	42.00 -		
20	Form work to Roof Beams & lintels	Sqm	71.71		, i
21	5mm dia and over upto and including 10mm dia in stirrups, spacers and binders	Kg	384.89		
22	10mm dia and above deformed CRS TMT bars	Kg	516.30		
23	RCC M 25 in columns upto Roof Slab	Cum	3.92		23
24	RCC M 25 in Roof Beams & lintels	Cum	16.46		
25	Brick work in CM 1.6	Cum	30.78		+(4)
26	S/F of Pressed Steel Doors Frame (single rebate)	Rm	27.00		
27	5/F of Rolled Steel Windows Shutters with hinges, Tower bolts , handle etc complete	Sqm	14.40		
28	S/F of Flush Door Shutters, 35mm thk solid core construction, with block board core and plywood face panels, commercial type on both sides	Sqm	12.60		
29	S&F MILD STEEL BUTT HINGES of 100 mm size. Medium weight, cold rolled mildsteel and fixed.	Nos	21.00		
30	S&F Aluminum Anodised TOWER BOLTS mm 10 dia 200 mm length	Nos	5.00		

	N N				
31	S&F Aluminum Anodised TOWER BOLTS mm 10 dia 150 mm length	Nos	5.00	ò	, jan
32	S&F Aluminum Anodised ALDROP BOLT 250 mm in length, 16mm dia Aluminium ailoy, anodised, sliding door bolt with hasp, staple (bolt type)	Nos	10.00		
33	S&F Aluminum Alloy D TYPE HANDLE WITH PLATE anodised Size of handle in mm 150	Nos	10.00		
34	Sand filling	Cum	17.01		
35	100 mm thick PCC (1:4:8) for sub-base flooring	Sqm	170.11		
38	Vitrified Tiles (600x600) 10 mm thick set and jointed in floors and pointed in white or coloured cement to match.	Sqm	174.44		- 1-5
37	Coloured vitrified tile <b>DADO</b> on 10mm thick cement mortar backing coat (1:3)	Sqm	56.83		
38	M&L rendering 12 mm thick in cement mortar 1:4 on brick work or concrete surface of walls finished fair and even	Sqm	154,14		4.00
39	Ex. Plaster 10mm thick 1:4 & 5mm thick 1:4 with water profing compound	Sqm	150.34		
40	M&L Two coats of <b>Acrylic Emulsion Paint</b> over a coat of primer	Sqm	304.47		
41	M&L Two coats of cement based wall care putty 1.5mm thick	Sqm .	304.47		98
42	M&L for preparation of new steel surfaces of any description over 10 cm width or girth and applying two coats of synthetic enamel paint over a coat of red oxide all as specified and directed.	Sqm	355,19		

	12			and the second second
43	M&L for preparation of new wooden surfaces of any description over 10 cm width or girth and applying two coats of synthetic enamel paint over a coat of wood primer all as specified and directed.	Sqm	25,20	
44	Treating with AT solution under plinth protection @ 5 lit/Sqm	Sqm	45.60	
45	50mm thk PCC 1:3:6 type C2 in plinth protection	Sqm	- 45.60 °	
46	Structural steel (Tubular sections for truss)	KG	2718.26	
47	Soft Board/ Screen board	Sqm	5.76	
48	S&F for ROOF of Prepainted Galvalume (PPGL) aluminum zinc coated GI based 0.5mm thick sheet having tensile strength of 550 MPa with self-tapping screws conforming to IS 277 2003 having min 150 gm/sqm galvanizing, as per approved make eg: TATA/Jindal/Lloyd. A sheet of flame stop 138 fire retardant aluminum foil radiant heat barrier for roof insulation—galvalume sheet (pattern of ribs can be of manufacturers design) cladding on both side rigid CFC free polyurethane foam of density 40 kg+/-2kg/cum as insulation. The thickness of PU foam shall be 30 mm	Sam	239 24	
49	S&F of Repainted Galvalume (PPGL) Ridge	Rm	20.30	

gypsum board false ceiling, fixed in dipre-coated steel section framework. Omm x 600mm made from GI 'L' size 30mmx 20mm x 1.25mm thick ons of size 30mm x 35mm x conforming to IS: 277: 1992 with amdumin GSM of 120 gms, suspended oof trusses with the help of 4mm dia Make; ARM STRONG/SAINT DEXUNE/KINGSTONE	Sqm	190.20	
lectrification (conducing, wiring & 10%	LS	3	
ance and unforeseen items 1%	LS		
1000.00	and unforeseen items 1%  I Amount (Rs.)		

## 53 (b) Amount In Words (Rupees

- 54. The quantity of items mentioned above in price bid of this tender are tentative and may a vary during execution of construction work. The complete construction work to be completed by the contractor at the overall cost mentioned at para 53 above.
- 55. All items / articles shall be approved by competent authority of school / or as authorized representative of the school, and confirming to relevant IS/ BIS Code.
- 58. List of Makes of products to be incorporated in the said works is attached as Appendix to this contract.

#### Defect Liability Period:

- 1. The defect liability period for the job is two years from date of completion of work. The Contractor shall be liable to repair any defect noticed during defect liability period without payment of any extra cost to school. The Contractor shall be responsible to attend the defect within 15 days from notice given in writing, failing which the defects will be rectified through another agency at the risk and cost of the Contractor and amount recovered from the Performance Guarantee.
- 5% of the total contract amount as Performance Guarantee will be kept reserve towards defects, if any observed, and will be released on successful completion of Defect Liability Period.

Signature of Contractor

#### PART IV - TERMS AND CONDITIONS

#### (GENERAL INFORMATION, INSTRUCTIONS AND CONDITIONS APPLIED)

- Last date and time for issue/depositing this Tender is 07 Nov 2020 by 1300 Hours. Tender Bids
  received after this date and time even by post/ courier will not be entertained.
- Sealed Bids by authorized contractor should be dropped in the Tender Box. No. responsibility will be taken for postal delay or non-delivery/ non receipt of Bid documents. Bid sent by FAX or e-mail will not be considered. If the renderer withdraws the tender before the said period or Issue of letter of acceptance whichever is earlier or makes modifications in the terms & Condition of the tender which are not acceptable to the competent authority then the competent authority will be at liberty to forfeit 50% of the said earnest money.
- Location of the Tender Box. Principal's Office Corridor/Main gate of the school.
- 4. Forwarding of Bids. Bids should be forwarded by contractors on the prescribed format attached with the tender separately as technical and price bids in separate envelopes. The technical bid should include the following details:-
  - (a) Technical Specifications.
  - (b) GSTN Number (photo copy to be attached)
  - (c) Bank Account No (cancelled cheque to be enclosed).
  - (d) Bank Address
  - (e) Complete Postal Address of Office.
  - (f) Office Landline and Mobile Phone Nos.
  - (g) E-mail Address of office (Optional).
  - (h) EMD for Rs 45,000/- in the form of bank draft drawn favour of Army Public School, New Cantt, Aliahabad (Refundable).
  - Tender Cost. Rs 2,000/- (Rupees two thousand only) not refundable.
- Rejection of Bids. Canvassing by the Contractors in any form, Unsolicited letter and post tender correction may invoke summary rejection with forfeiture of Earnest Money Deposit(EMD) conditional tenders will be rejected.
- 6. Validity of Bids. The Bids should remain valid for 90 days from the date of submission of bids.
- 7. <u>Earnest Money Deposit(EMD)</u>. The renderers have to submit Rs 45,000/-(Rupees forty five thousand only) in the form of Bank Draft in favour of " ARMY PUBLIC SCHOOL, NEW CANTT, ALLAHABAD" payable at Allahabad as EMD. The unsuccessful Contractors will be returned to them without any interest at the earliest.
- 8. Architectural, structural drawings and consultancy charges will be deducted from the contractor's payment @ 4.5% of total cost of project. These charges will be deducted from each bill of the contractor.
- All the Tax will be deducted at the time of any payments as per defined/ eligible tax rate and authority will give proper documents of depositing the same amount to contractor/ suppliers.

Signature of Principal

Army Public School New Cantt, Allahabad

Signature of Contractor

- 10. The tenderers have to quote their rates both—in figures and words. Amount mentioned in words will be final in case amount mentioned inf figure and words differ. The rates quoted in the tender should be inclusive of all freight, taxes, service tax, GST and other incidental charges if any (i.e. F.O.R. School campus).
- 11. Every page of the fender should be signed (full signature) and rubber stamped by the tenderer. It should also be signed wherever there is overwriting and cutting
- All works services will be according to specification as per tender paper or subject to approval by the Board of Officers.
- The successful contractor is solely responsible for the materials and labour necessary for the completion of work
- 14. The Contractor is responsible for periodic cleaning of the site during the construction process and removal of all construction material and debris at all time necessary, during and at the end of construction period.
- 15. The Contractor is responsible for ensuring all safety and security measure to be adhered to on site during the construction process including the safety of all students, staff and workmen along with the security of the site. Contractor will ensure that necessary screens are erected at work site to segregate the construction area from the school premises and ensure no access to students at the site of construction during the construction phase. The contractor will be held responsible for safety and security of his workers and school authority will not be responsible for any untoward incident if occurred and no claim on the school will be imposed by the contractor.
- 16. The Contractor is required to ensure that measures are put in place to militate against all potential social and environmental impacts that can arise as a result of the use of equipment and machinery associated with the construction of the project.
- 17. The Contractor shall be deemed to have examined all documents, conditions of contract and to have acquainted himself with the detailed descriptions of the work to be done and the way in which they are to be carried out.
- 18. The Contractor shall be deemed to have visited the site before preparing his tender and to have examined for himself the conditions under which the works will process and all other matters affecting the carrying out the work and cost thereof.
- 19. The Contractor will maintain records of minimum wages to their labour any dispute in this regards will be dealt with directly by him and not by the school.
- 20. The tender forms will be issued to the interested parties only after receipt of application for issue of tender from Contractor and after satisfying the credentials of the person/ party.
- 21. The Contractor, whose tender is accepted, will be required to furnish performance guarantee of five percent (5%) of the tendered amount and a sum @5% of the gross amount of the bill shall be deducted from final bill and will be kept for one year.
- The construction work should be completed within 90 days from issue of work order.
- 23. Incase the work is not completed within the stipulated time frame, liquidated charges at the rate of 1% per week will be imposed on the Contractor subject to maximum of 10% of contract value. This amount will be adjusted from the bill of the Contractor.

- 24. The competent authority doesn't bind to accept the lowest or any other tender and reserves right to reject any or all the tenders received without the assignment of a person
- 25. The Contractor shall submit minimum four progress report during the execution of work. This report shall be prepared in direct relation to the time stated in the contract documents for completion of items of work. A separate report will be given by the Contractor be made in writing by the Contractor:

#### 26. Terms of Payments

- (a) 20% of total contract amount will be paid after completion of Plinth beam including all foundation work and earth filling of ground floor.
- (b) 15% of total contract amount will be paid after completion of work up to roof level including casting of columns, Brick work etc of Ground Floor.
- (c) 25% of total contract amount will be paid after completion of Sheet roofing work including fabrication of truss etc.
- (d) 20% of total contract amount will be paid after completion of flooring/tiling plastering, electrification, filment of windows 8 doors, water supply etc.
- (e) 10% of total contract amount will be paid after completion of all works including lighting, finishing like painting, white washing etc.
- (f) 5% of total contract amount will be paid after checking and satisfactory report by BOO during taking over of building.
- (g) Balance 5% of total contract amount shall be paid after completion of defect liability period of contract i.e. two years after successful completion of the work and rectification of defects, if noticed during the defect liability period.
- 27. <u>Arbitration Clause</u>. Decision of the Chairman, Army Public School, New Cantt, Allahabad will be binding to both parties and is not subject to be referred to any court. Place and arbitration for any legal dispute will be Allahabad.
- Quality of the Items. All Items / articles shall be approved by the competent authority
  of the school and architect appointed by the school which shall be confirming to relevant IS / BIS
  code.

Signature of Contractor

## PART V - DETAILED SPECIFICATIONS OF BUILDING WORK

## 1. Earth Work

- (a) All layout work with proper bench marking of center line's of columns.
- (b) Excavation of earth for trenches to construct footing as per details and size and refilling of trenches with excavated earth.
- (c) Anti termite in foundation before preparation of foundation bed.
- (d) Earth filling of plinth floor area and deep watering, compaction. Leveling etc.

## 2. Anti-Termite Treatment

- (a) Providing and injecting chemical emulsion for constructional anti-termite treatment and creating a chemical barrier under and all-around the column pit, walls trenches, excavation top surface of plinth filling junction wall and floor along the external perimeter of binding expansion joints, surrounding of pipes and conduit etc.
- (b) Chloropyriphos solution shall be used in 1:19 mix proportion (1 Liter Chemical:19 Liter water) in foundation trenches, plinth floor area, apron all around the building etc. as per detail and direction.
- (c) 5 liters of chloropyriphos solution in per Sq.m. area of foundation and 7.5 liters of chloropyriphos per sq.m. of Plinth floor area shall be used.
- 3 Foundation Base 150 mm thick foundation base in P.C.C. 1: 4: 8 type D-2 (1 cement: 4 course sand: 8 graded stone aggregate 40mm nominal size stone ballast) in trenches, well compacted.

## R.C.C. Work & Sheet Roofing

- (a) The foundation, columns, all level beams, chajjas, slabs etc. shall be of R.C.C. The design mix of concrete shall be M -25 (design mix) and as per the details and direction.
- (b) Material used in R.C.C. foundation, column, all level beams, Slabs, chajjas and other places shall be approved by the Architect appointed by the school.
- (c) The mix proportion of cement, course sand, Aggregate for R.C.C. works shall be M -25 (design mix) and as per design details and direction.

Signature of Contractor

- (d) Mechanical mixture machine and vibrator shall be used for any type and quantity of R.C.C. work at any level.
- (e) The P.P.C. cement of approved make shall be used confirming all IS Code. Make of Cement : ACC/JP/Birla.
- (f) Provide form work and plywood shuttering for R.C.C. columns, slabs and beams as per design, details and direction.
- (g) The T.M.T. mild steel bars shall be used in R.C.C. work confirming all I.S. Codes. Make of TMT Bar: Fe500/Fe 500D/Fe550D, SAIL/RINL/TISCO/ M/s Shaym steel Industries Ltd Durgapur West Bengal/ M/s SPS Rolling Mills Ltd Durgapur West Bengal/ M/s Jai Balaji Industries Ltd Durgapur, West Bengal/ M/s Jindal Steels Ltd/ M/s Concast Steel & Power Ltd Kolkata/ Shyam Mettalics & Energy Ltd. Brand 'SEL'
- (h) Providing binding, bending, cutting, placing, lifting of all type of mild steel reinforcement for R.C.C. or other work.
- (j) Make and size of mild steel reinforcement used for R.C.C. or other work shall be approved by Architect or Engineer in charge, confirming all IS code.
- (k) Proper water curing of all R.C.C. work up to seven days from the date of casting regularly.
- (I) Quality of course sand and 20 mm size granite quartz aggregate shall be used as approved by Architect or Engineer In charge.
- (m) Fabrication, Supply & Fixing truss work / m.s. pipe as per design, purlins, rafters, and trusses will be ISI mark M.S. members with priming, painting and fixing all complete Conforming IS-1161/IS 4923 Pipes / Tubes. As per the design, drawing, direction and details specification.
- (n) Supply and fixing of color coated Aluminum –ZincAlloy coated steel (Aluminum around 55% & Zinc -43%) rib profile sheets of 0.50 mm thick (TCT) having effective width 1000 mm +/- 10 mm, crest 25-32 mm and 200-250 mm pitch C/c with male female side laps and anti-siphoning features at male end, minimum Yield strength 550 MPA and confirming standards AS 1387; ASTM A 792 in approved color and make including accessories such as Gutter Flashing, ridge pieces, barge boards, Crimped curves and with hylon coated self-tapping / self-drilling screws with EPDM washers etc., all works complete as per drawings, specifications and instructions of Engineer in charge. Rate includes cost of all materials against supply. Carriage Erection, Installation for roofing at all heights upto 13.00 m above from Ground level, labour, tools & plants and all other incidental charges etc complete. (Payment will be done on covered area basis) as per the design, drawing, direction and details specification.

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Army Public School, New Cantt Allahabad

## Brick Work in Foundation, Plinth and Super Structure etc.

- (a) Provide and construct 230 mm thick brick wall, in 1: 6 cement, medium sand, mix mortar with first class locally available bricks in foundation, plinth wall in super structure wall etc. as per details and direction.
- (b) Provide and constructe 115mm thick (4.5°) brick work in 1: 4 cement, medium sand mortar in super-structure with 2 Nos. 6mm dia MS bars at every 8 coarse of brick work, as per details and direction.
- (c) Provide and prepare all type of scaffolding work and other tools and plants for proper completion for brick work as per direction.
- (d) Proper water curing all type of brick masonry work up to seven days from the date of construction
- (e) The quality of all type of brick, cement, sand etc shall be confirming IS code and approved by the Architect.

### 6. Plastering Work

- (a) 15 mm thick cement sand plastering work on walls calling, beams, columns etcinside and outside of the building as per direction.
- (b) Provide 10 mm wide grove in plaster at every joints of beam, and columns with brick work.
- (c) All the plaster edges shall be in plumb line and sharp.
- (c) Plastering on ceiling and external exposed surface shall be in 1:4 cement, medium sand mortar mix as per specified thickness.
- (d) Internal plastering shall be in 1:4 cement, medium sand mix mortar as per specified thickness.

7 Form Work, Shuttering, Centering, Scaffolding Work.

- (a) Provide, prepare all type of plywood/ steel form work for R.C.C. columns, footings, etc.
- (b) Provide & prepare all type of plywood shuttering and centering for R.C.C. beams at any level R.C.C. slab at any level as per design and details.
- (c) Provide and prepare all type of scaffolding for all type of work as per requirement and direction.

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8 Damp Proof Course

- (a) Provide and construct 40 mm thick D.P.C. on entire top surface of plinth beam and wall with recommended water proof chemical as per detail and direction
- (b) The damp proof coarse shall be casted with P.C.C. 1;2:4 type B-O concrete mix using 12.5 mm size stone aggregate.
- (c) The water proof chemical used for D.P.C. shall be confirmed IS code and the proportion or dosage of chemical as described by make or brand.
- (d) The make or brand of water proof chemical shall be as per direction of Architect or Engineer In charge. Make :Ace proof/ Ace/ Impermo

## Flooring and Skirting Work

- (a) 52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2.4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix: 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications and tiling on floor with vitrified tiles and four fit wall inside and verandah one side tiling upto four feet height. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete, as per the drawing, details, direction and details specification.
- (b) Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement: 3 coarse sand), finished with a floating coat of neat cement, as per the drawing, details, direction and details specification.
- Doors & Windows. All Material used in work shall be of approved make, brand and confirming IS code.
  - (a) Providing and fixing of all door-frame, windows frames, door shutter etc.
  - (b) All door frames shall be made of mild steel angle section 40 mm x 40 mm x 6 mm with grill on ventilators as per details and design.
  - (c) All windows shall be sliding type made of color Coated Aluminum Windows with aluminum grill and 5mm thick clear transparent glass and fixed with stainless steel fly/mosquito proof jali as per design details and direction
  - (d) Provide and fixing 35 mm thick flush door with all GI fastener, fixtures and accessories of heavy quality approved make size, shape, design, colour and confirming IS code.

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 Painting Work. All Material use in painting work shall be of approved made, shade, colour, texture and confirming IS code.

#### (a) In Internal Surface

- (i) Providing and painting one coat of white cement of J.K. white cement or Birla white cement on wall and Ceiling surface as a Primer coat use 3.84 kg white cement for per 10 Sq.m. of surface including supply all tools plants etc for proper completion of work.
- (ii) Providing and applying Birla white or J.K. white wall care make putty on wall and Ceiling surface in two coats including rubbing and smoothing the surface properly to make in uniform and even including supply of all tools and plants for proper completion of work.
- (iii) Providing and painting one coat of primer over the putty finished surface.
- (iv) Providing and painting in two coats oil bound distemper over the wall and ceiling surface, of approved brand, colour, shade confirming IS code, as per detail and direction of Architect.

#### (b) In External Surface

- (i) Providing and painting one coat of white cement of J.K. white cement or Birla white cement as a Primer coat use 3.84 kg white cement for per 10 Sq.m. of surface including supply all tools plants etc for proper completion of work.
- (ii) Providing and painting water proof super snowcem made cement base paint in 2 coats over the one coat of primer coated wall plastered surface of approved colour, shade, confirming IS code as per detail and direction.
- (iii) Provide and painting with two coat synthetic enamel paint over one coat red oxide primer on mild steel door frame "Z-Section window all grill and railing etc. of approved make and colour etc, as per direction.
- (iv) Providing and painting Asian Paint or Nerolac Made enamel paint of approved colour and shad in two coats on mild steel door frame Z section window grill and railing etc. as per details and design.
- (v) Providing and painting Asian Paint; or Nerolac made wood primer and enamel paint in two coats of approved colour, shade as per details and direction.

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## 12. Electrical Work

- (a) All material used for electrical work shall confirming the IS code, as per details, drawing and directions
- (b) Providing, laying and fixing of Electrical fan boxes and P.V.C. 25mm dia. Electrical Concealed conduits in slab and walls of approved made as per the electrical design details and direction and confirming IS code
- (c) Providing and fixing of electrical 25mm dia, P.V.C conduits in wall for concealed electrical circuit wiring as per the details and direction. The P.V.C. pipe shall be of approved make and confirming IS code.
- (d) Providing and laying copper wiring in electrical circuit of approved make and size confirming IS code:-
  - (i) All light, ceiling fan and silent exhaust fan (quantity will be fixed as per drawing and as per instructions of school authorities) circuit wiring shall be with 1.5 Sq.mm, copper wire and 1.5 Sq.mm, copper earth wire. The wire shall be of approved make and confirming IS code. 12 x ceiling fan and LED tube lights will be fitted in Library as per drawing.
  - (ii) All power point circuit wiring shall be with 2.5 Sq.mm, copper wire and 1.5 sq.mm, copper earth wire. The wire shall be of approved make and confirming IS code.
  - (iii) Providing and fixing 5AMP, 15 AMP electrical switches and socket in circuits of approved make design, shape, colour and confirming I.S. code.
  - (iv) The location and numbers of switches boards, power points, LED tube lights points, fan points etc shall be as per details drawing and direction.
- (e) Providing, fixing and making distribution board for electrical supply to all circuits with using M.C.B. & E.C.B. etc. of approved make confirming IS code.
- (f) Providing laying, electrical connection to distribution board with outdoor main Electrical supply.
- (g) Providing, fixing and making distribution board for AC connection /electrical supply to all circuits with using M.C.B. & E.C.B. etc. of approved make confirming IS code.
- (h) Providing and fixing one MCB box for electrical supply to all circuits with provision to switch off the light of entire block if not required to ensure safety of the building.
- (j) Providing and fixing conduiting Pipe for computer aided learning (TAL) /LAN will be laid as per instruction of the school.

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## Water Supply Work (if required by the school).

- (a) Providing laying and fixing of concealed Prince or supreme made P.P.R. pipe for water supply from overhead water tank to all outlets at water closets, urinals, wash basin taps, etc, and up to drinking water outlets, as per design and details direction where applicable. The material used shall confirming I.S. code.
- (b) Providing laying, fixing and connecting 2 Nos. (i.e. 1 No for ground floor and 1 No for first floor toilet block) 1000 liters Syntax or Polytuff make triple layer P.V.C. water tank over the terrace of toilet, as per details, drawing and directions where applicable.
- (c) Providing laying and connecting water tank with main water supply line inside the school campus (if required by the school).
- (d) Providing and fixing Hind ware or Parry ware make, of approved colour design, water closet, wash basin as per details and direction. The material used shall be confirming I.S. Code as per details, drawing and directions as applicable.
- (e) Providing and constructing inspection chamber in required No & size at recommended location as per details, drawing and directions as applicable.
- (f) Providing laying, fixing and connecting 150 mm dia P.V.C. sewer line connection from outside located inspection chamber to septic tank and soak pit or existing sewer line.
- (g) Providing and construction of inspection chamber of required size and shape as per the design and detail inside and outside the building for proper sanitation where applicable...
- (j) Providing and fixing of supreme or prince make 150mm, 100mm, 75mm, dia. P.V.C. pipe, Nahani traps, other under floor arrangements to fix water closet, wash basins etc. for proper sanitation, from toilets and other water log area to inspection chamber located outside the building, as per the detail design and direction where applicable.
- (k) Providing and fixing of 100mm Dia, P.V.C. rain water pipe at required position as per details and direction.

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14. Plinth Protection. Provide and construct 750 mm wide and 75 mm thick P.C.C. 1:2:4 type B -2 Bed as plinth protection over the 100 mm thick P.C.C. 1:4:8 type D -2 (1 Cement :4 Course Sand : 8 – 40 mm stone ballast) bed, as per details and direction all around the building

## 15 Approach Path

- (a) Providing and laying 3 meters wide with 60 mm thick M-35 grade interlocking tiles pre-polished rubber moulded approach path over 100 mm thick PCC 1:4:8 type D -2 base at both end of building connected to inside campus road.
- (b) The make design, colour, shape, pattern of Interlocking tiles shall be approved by Architect or Engineer in charge and confirming I.S. Code.
- 16. <u>Drawing and Design Charges</u>. Architectural, structural drawings and consultancy charges will be deducted from the contractor's payment @ 4.5% of total cost of project.
- 17 Testing Charges. All testing charges for brick, cement, material, design mix, soil testing and all testing charges etc shall be paid by the Contractor without any extra cost to school.
- 18. <u>Jurisdiction in case of Dispute</u>. Any matter related to this work will not be referred to any court of law by the both parties. In case of any dispute between school and the contractor arises, decision of the Chairman APS, New Cantt, Allahabad will be binding to both parties. Jurisdiction of any complaint will be Allahabad (Prayagraj).

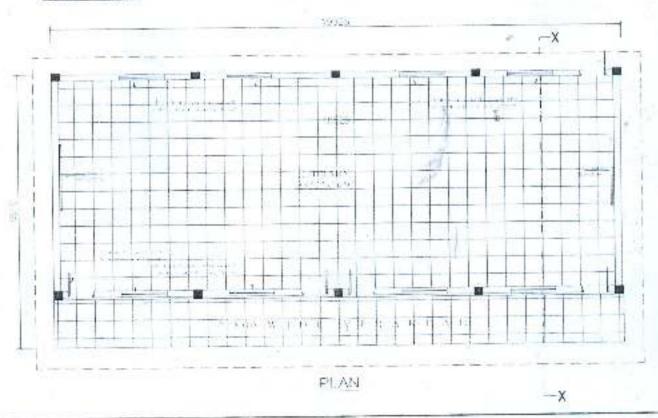
Signature of Contractor

## PART VI ;- DRAWING OF THE TEMPORARY LIBRARY

Attached Drawings :- Four Nos (DW 01 to DW04)

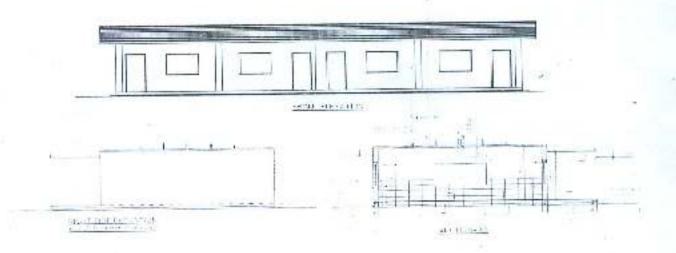
DW-01 PLAN

Note: All dimensions in mm



### DW-02 ELEVATION & SECTIONS

Note: All dimensions in mm

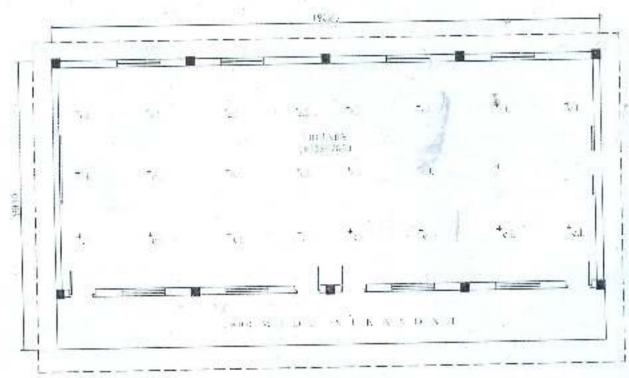


Signature of Contractor

Date

Principal Army Public School New Cantt, Allahabad DW- 03 ELECTRICAL DETAILS

Note: All dimensions in mm



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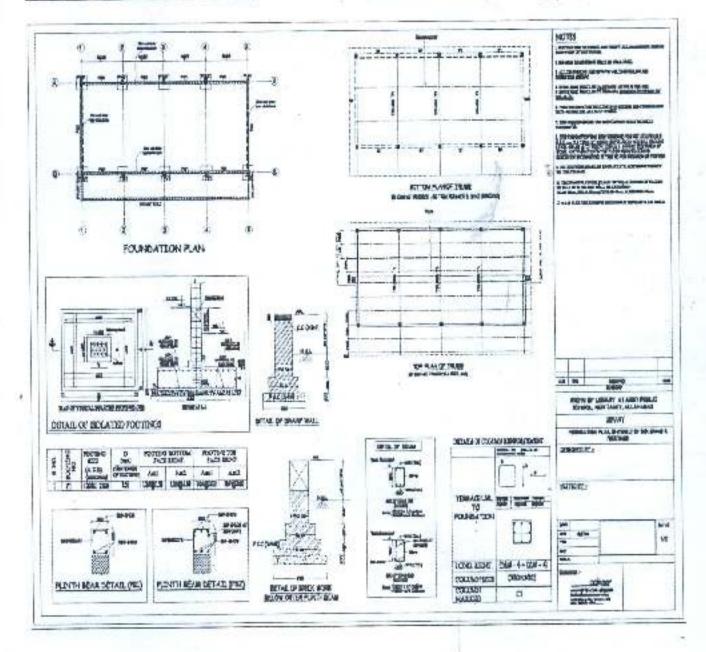
Signature of Contractor

Date:

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## DW-04 FOUNDATION DETAILS

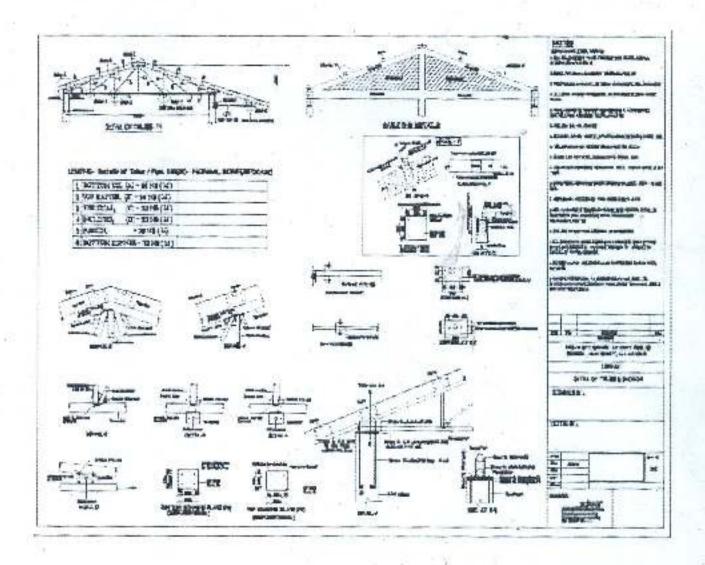
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Signature of Contractor

Date:

Note: All dimensions in mm



Signature of Contractor

Date:

## MAKES OF PRODUCTS TO BE INCORPORATED IN WORKS (B&R)

Ser Name of item		Makes/Brand/Manufacturers				
1.	CP Bib Taps stop valves & Pillar Taps, surgical basin mixer, shower rose etc	(a) Jaquar & Co Pvt Ltd (c) Marc	(b) Zolotov (d) Blue star Silver shine			
2.	Taps & stop cocks (brass)	(a) M/s Prakash & Co Maypuri, Delhi (c ) Marc	(b) Zolotov (d) Jaquar & Co Pvt Ltd			
3.	Aluminum anodized fittings (iron mongrey)	(a) M/S Elite Enterprise, Mumbai (c) Mepro (e) Classic, New Delhi	(b) M/S Aluminium Udhyog (d) Crown by Mohan Metal Ind. Shahadra			
4.	Sanitary ware (Basin/WC)	(a) Neycer kermag (standard) (c) Parryware (super fine) (e) Jaqur & Co Pvt Ltd	(b) Hindustan santitary Ware (Hindware) (1 <sup>st</sup> quality) (d) Cera (1 <sup>st</sup> quality) (f) Johnson Padder			
5.	Seat cover for EWE	(a) Commander- Champion (c) Hindware	(b) Paryware (d) Blue star Silver shine			
6.	PVC Flushing Cistern IS: 774-1984	(a) Commander champion (c) Hindware (e) Cera	(b) Parryware slimline (d) Blue star Silver shine (f) Hindustan			
7.	Mosaic/ PCC Plain / chequered tiles / inter locking paver blocks	(a) M/S Mehatab Tiles, 8 Rani Shopping Centre, Bhanwar, Indore (b) Redsum tiles & Pravers, Panchkhula	(b) NITCO, Mumbai (c) Star tiles & Industries, Rama Devi, Kanpur (e) Mayur tiles & Interlocking paves, Lucknow			
8.	PVC tiles / wooden Flooring	(a) Premier viny flooring Ltd. New delhi (c) Armstrong	(b) Marblex (d) Royal Clushion viny Products Ltd, delhi			
9.	Acid resistant tile (IS: 4457)	(a) Endura by M/S H R . Johson (C) M/s Lashar Industies, Ishwar Nagar, Delhi	(b) Regency (d)M/s Burn standard Co Ltd, Po box No-13 Jabalpur			
10.	Vitrified tiles	(a) Kajaria (c) Asian Granito (e) Varmora granite	(b)Johnson (Marbonite) (d) Oracle Granito (Marbito) (f) Somany			

Principal Army Public School New Cantt. Allahabad

	Land to the second seco		
11-	Ceramic Tiles / Non sk ceramic tiles	(c) Johnson (e) NITCO. (g) Crystal Ceramic Industries	(b) Regency (d) Somany (f) City tiles
12.	Tiles Adhesive tiles Grou	t (a) M/s Bal Endura, Bangalore (c) Fevimate	(b) Laticrete Hyderabad (d) fairmate
13	Plywood for general purpose (ISI 303 Marked)	(a) sudarshan plywood, industries. 119-park street culcutta (b) Kitply	(c) Mysore Chip board (d) Shiv Hari plywood (e)Century plywood (f) Swatick plywood (g) green ply (h) Marina
14.	Plain Particle board / Particle board ceiling tiles / Prelaminated particle board	(a)kit ply (b) Bhuttan board (c) Nepal Board	(d). Archidlam (e.)Nova pan (f). Ecoboard
15.	White cement & wall care putty	(a) JK White (b) Birla white	
16.	Plain / Pin headed / frosted sheet glass	(a) Hindustan pilkingtaon glass (b) Saint Gobbain	(c) Modi Guard (d) Asahi
17.	Looking Mirror	(a) Saint Gobain (b) Modi Guard	(c) Atul (d) Asahi
18.	Laminated sheets	(a) Green lam (b) Formica/ Sunmica (c) Decolam from	(d) Century (e) Associate Décor Ltd
19.	Corrugated, semi corrugated & plain AC sheet	(a) M/S Ramco AC Sheets, SWASTIK (b) M/S Esternit Everest Ltd	(c) UP Asbestos( UPAL) (d) Chaminar (e) Visaka (f) RBL
20.	Gypboard false ceiling	(a) Indian Gypsum (b) Everest IndustriesLtd( E-Board)	
21.	Putty for galzing	(a) Gold mohar, (b) Shalimar hardware (c) Berger (d) J & N (e) Rajdoot	
22.	Chemical for antitermaite treatement (chloropyrifos 20%, Lindain 20%)	(a) dow Agro chemicals (b) Pest control of India (c) Montari Indstries Chandigarh (d)Gammax (Lindane	(e) M/S Kanoria chemicals & Industries limited (KANODANE-20EC) (f) M/s Singhal Pesticides, Agra

July

40		20%EC)		
23.	Synthetic enamel paint	(b) Asian paint(Apocolite) (c Shailimar Paints (Superlac Hi gloss) (d) Goodlass Nerolac paints Ltd (Nerolac)	(e) Jenson & Nicholson paints Itd(Brolac) (f) berger paints (Luxol Hi Gloss) (g) Nerolac (Nerolac full gloss)	
24.	Plastic emulsion paint	(a) Goodlass Nerolac (All Escapes) (b) Shalimar Paints(Hussian collection) (c) Jenson & Nicholson(special effect)	(d) Asian paint(Royal) (e) ) berger paints(Luxol silk splender) (f) ICI paint(Dulux Velvet touch)	
25.	Intergral water proofing compound (powder)	(a) Water seal from Acropaints	(d) FOSROC INDIA (e) CICIO (f) PIDILITE	
26.	Rigid PVC paneled door	(a) Rajshree plastiwood (b) Sintex (c) Kumar Arch Tech Ltd	(c) Polyline from Polyline extrusion Pvt Ltd Kolkata (d) Duroplast extrusion Pvt Ltd	
27.	Stainless steel sink cum draining board/Sink/Plate Rack	(a) Prayag Polymer Pvt Ltd (b) Nirali		
28.	Integral WP compound (Liquid)	(a) CICO No.1 (b) Masterproof IWPI choks chemicals (c) FOSROC INDIA	(d) Accro-1-Accro paints sey (e) MC Bauchemie (f) PIDELITE Industries (g) IWL INDIA Ltd	
29.	Acrylic washable distemper / oil emulsion distemper	(a) Goodlass Nerolac (Super Acrylic ) (b) Shalimar Paints( No. 1 : Premium Acrylic distemper) (c) Jenson & Nicholson(Jensoline Acrylic distemper)	distemper) (e) ) Berger paints(Bison Super) (f) ICI paint (Maxilite Acrylic distemper)	
30.	Cement based paints	(a) Super snowcem (b) Duracem (c) Cemplus by TATA pigments	(d) Gutucem by Asaian paints (e) Accrocem	

Principal Army Public School New Centt, Allahabad

 31.	External Weather proof paint	(a) Berger paints (Weather coat smooth) (b) Asian paint(APEX)	(c) Shalimar Paints ( XTRA (d) Nerolac paints (AXCEL)
32.	Construction Chemicals	(a) Chokesy chemicals (b) farirmate (c) Pidilite (d) fosroc	(e) MC Bauchemie (f) Roof Chemicals (g) Bal Endura
33	Factory made Shutters paneled / Skelton shutters (Fly proof / Glazed)	(a) M/s Goel Brothers, Raipur (c) M/s Northen Doors Pvt Ltd, Kanpur (e) M/s Choiti Industries, Kanpur	(b) M/s Joinery Manufacturing Co, Calcutta (d) M P Wood Product (f) M/s Oriental door, Mandhana, Kanpur
34.	Flush ISI Marked	(a) Commander –Ajay plywood (b)M/S Century plywood (c) M/s Mysore chip board Archid	(d) M/s Northen doors Pvt Ltd Kanpur (e) M/S Shiv Hari plywood (Corbett) (f) M P Wood Product
35.	Bituminous product	(a) M/s Faridabad spinning & woolen mills Pvt ltd, 837, SP Mukherjee Marg Delhi (b) M/S STP Limited	(c) M/S MK Petroproduct Faizabad. (d) Bengal bitumen, sarita vihar New Delhi. (e) Shivam tar products, Mathura-281004
36.	Steel windows ventilator (as per IS- 1038 of 1983) & pressed steel door / window frames, steel lockers & cupboard frame/shutters	(a) M/s Ishwar Industries, 175/a, Bombay Bazar, Meerut cantt (b) Aswini & Sons,E-15 Patel Nagar II, Ghaziabad (c) M/S Sen-Harvic, vora building, 1st floor, 50 Nakhoda street Bombay (d) Agra timber & steel products, Agra (e) Gupta & Jain Enterprises	(f) M/S Multiwyn Industries Corpn Calcutta. (g) M/S G S Udyog, G-11, Site III, Panki UPSIDC Industrial Area, Kanpur (h) Chandni Industries Ghaziabad. (j) Poonam Enterprises. E- 10, Industrial Estate. Talkatora, Luck now (k) M/S AGEW steel Manufactures,
37.	Aluminum section for door / window	(a) Hindalco (b) Indal	(c) Ajit India (d) Jindal (e) KVSM

Principal Army Public School New Centt, Allahabed

38.	Polymeric membrane for water proofing treatment to roof / sunken floor	(a) Hyperplas standard polymeric membrane manufactured by IWL India Ltd.  (b) STP Ltd – Super Thermo lay  (c) Asian Paints – Smart Care  (d) Bengal Supermat- Bengal Bitumen Pvt Ltd New Delhi  (e) Shivam tar products, Mathura - 281004
39.	HDPE (Polyethene) water storage Tanks (Rotational moulded) Three layered, ISI Marked double layer	(a) Sintex (b) JS Polyplast (c) Dhara (d) Tuff
40.	PVC pipe SWR pipes (IS-13592 for pipes & IS-14735 for fitting)	(a) Finolex (b) Supreme (c) Prince
41.	Stop valves / Gate Valves / Float valve	(a) Leader, Bombay metal & alloy Co. (b) Bir Jalandhar (c) Bombay Metal & Alloy Co (d) Zoloto (e) Vardhman (f) NMC
42.	Glass Mosaic Tiles	(a) Italia (b) Bisazza (c) Accura
43.	CI (Centrifugally cast) pipes as per IS-3989 for sewage disposal & Rainwater pipes	(a) Jayaswal Neco. (b) Kapilansh (M/s Kapilansh Dhatu Udyog (P) Ltd. Nagpur) (c) HEPCO by M/s Binay Udyog Pvt Ltd, Kolkata (d) BIC Kolkata
44.	Sewer bricks	(a) M/s Priya Clay Products Pvt Ltd, New Delhi (b) M/s Ritu Bricks Lvt Ltd, Bhilwara Rajasthan (c) M/s Maruthi Brick Works, Bangalore (d) M/s Priya Bricks Pvt Ltd, Kolkata (e) M/s Red Ceramics Limited, Kolkata (f) M/s Modern Bricks & Engg Works, Bassi, Patiala (g) M/s Prayag Bricks, Varanasi
45.	SGSW pipe	(a) Perfect Jabalpur (b) Devraj Anand Ghaziabad (c) Gupta Refractories Gwalior
46.	Porcelin tiles	(a) Century (b) Johnson (c) City Tiles

Principal Army Public School New Comb. Allahubad

## 50. LIST OF SECONDARY PRODUCERS FOR SUPPLY OF STRUCTURAL STEEL

(a) M/s Kashi Vishwanath Steel Ltd Narain Nagar, Bazpur Road Kashipur Distt – US Nagar Tele : 05947- 262138, 262109 Fax: 05947-262103	(b) M/s Shyam Steels Industyries Ltd. White Towers, 115 College Street 1 <sup>st</sup> Floor KOLKATA- 12 Tele : 033- 22373333, 223733311 FAX : 033- 22256781	Shakti Ispat Ltd Plot No 6, Phase-11 Industrial area, Kala Amb Distt - Simour (HP)	19, Alandi Market Road.
(e) M/s KL Steel Pvt Ltd Post Box No 61, Lai Kuan Bulandshahar Road, GHAZIABAD (UP) Tele : 0120- 2667911, 2867915 FAX: 0120-2867917	(f) M/s SRMB Udyog Ltd 46,BB Ganguly Street, Kolkata – 700 012 Works: 1, Oil Installation Road, Paharpur, Kolkata-700 008 Tele: 24391161 FAX: 033-2236666	(g) M/s Shree Parashnath Re- Rolling Mills Ltd 14C Maharshi Devendre Road 3 <sup>m</sup> Floor, Kolkata-700007 Adm Office 3511 Part Dr BC Roy Avenue Durgapur-713201 Tele : 033- 22740045/4475; FAX: 033-22740039	M/s KL Concast Pvt Ltd Z-18, Naraina New Delhi <u>Work Office</u> 25 <sup>th</sup> Mile Stone Bulandshahar Road GHAZIABAD (UP)

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## Appendix 'A' (Contd...)

## MAKES OF PRODUCTS TO BE INCORPORATED IN THE WORKS (E/M ITEMS)

1	Rigid steel Conduits	08	Rigid PVC conduits
	New India Conduits Pvt Ltd.		(a) Indo-American Ltd
	Faridabad BEC		(b) BEC
	AKG		(c) ICL
	Steel Kraft		(d) Finolex (e) Ess Ess Kay Engineering
2.	MCCB/ELCB/RCCB/Distribution	09	(e) Ess Ess Kay Engineering Switch Fuse/Main Switch
	Board		(a) Crompton Greaves
	(a) Schneider (g) INDOASIAN		(b) U&T
	(b) Legrand (h) Havells		(c) Legerand
	(c) GE (Power)		(d) Havells
	(d) ABB		(e) Controls & Switchgear
	(e) L&T (f) C&S		(f) GE (Power)
3.	Street light fittings	10	Time Switches
	(a) Philips (e) CG (b) Wipro (f) GE		(a) HAGER (Marketed by L&T)
			(b) Legrand
	(c) Bajaj (d) C&S		(c) Schneider
4	Lamp Holder	11.	HPSV/HPMV Fittings & Lamps
	(a) Esskay		(a) PHILIPS
	(b) Anchor		(b) WIPRO
	(c) Plaza		(c) BAJAJ (d) WIPRO
			(d) WIPRO (e) C &S
			(6) 000-
5	Copper wire for internal wiring	12	LT Cable
	(a) NICCO		(a) Universal (b
	(b) Grandlay		Finolex (Asian) (d
	(c) FINOLEX (d) Universal		(c) RPG (Asian) (d Nicco
	(e) Havells		(e) LAPP (f
	(f) Kalinga Premium		Havelis
	(g) LAPP		(g) ELEKTRON (h
			Kalinga Premium
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- 6	Telephone wire Armoure	d 1:	Measuring Instruments/
	Cables (a) Skytone (b) Rallison (c) Deltone	V	Relays/CTS (a) Havells - (b) Crompton Greaves (c) Schneider
	(d) Finolex (e) Kalinga Premium		(d) AE (e) Easun (f) IMP (g) L&T (h) Jyoti
07	GI Pipes  (a) JINDAL  (b) TATA  (c) PRAKASH Surya	14	
	Electric switches/sockets/Bell Bush/Fan regulator/Ceiling Rose (a) Cona (b) Legrand (c) SSK (d) Havells (e) Plaza (f) Anchor (g) C&S Gewiss	22	HT XLPE Cable  (a) Universal  (b) RPG Asian  (c) Havell  (d) Nicco  (e) Torrent  (f) Kalinga Premium
16	Domestic light fittings/ wall brackets  (a) JEMCO (b) VIKAS (c) PRAKASH (d) BAJAJ (e) CROMPTON GREAVES (f) SPARKO (g) Decon (h) AMC	23	Ceiling/Exhaust/Cabin Fans  (a) Khaitan (b) Orient (c) Usha (d) Polar (e) Crompton Greaves (f) Almonard (g) Havells (h) Bajaj
17	CFL fittings & Lamps  (a) Bajaj  (b) GE Lighting  (c) Philips  (d) Finolex  (e) Wipro  (f) C & S	24	Tube light fittings  (a) Philips (b) Bajaj (c) Wipro (d) C & S

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18	Air Circulator	25	Flameproof fittings
	(a) Almonard (b) Havells (c) Usha (d) Crompton Greaves	TIV <sup>2</sup>	(a) Sudhir (b) Flexpro (c) Shyaam (d) Baliga
19	Geysers	26	Energy Meter
	(a) BAJAJ (b) Venus (c) Usha Lexus (d) Racold (e) Havells (f) Crompton	20	(a) Haveli's (b) Enercon (c) Secure, (d) HPL India Ltd (e) Indo Asian Fusegear Limited
20	Ammeter, Voltmeter, P/F  Meter & Frequency Meter  (a) AE (b) IMP (c) MECO (d)  HAVELL's (e) Enercon (f)  Secure (g) HPL India Ltd	27	(a) Modern Insulators (b) Jayshree Insulators (c) Jaipuria Brothers (d) NGEF (e) Southern insulators (f) Bengal Potteries Ltd (g) BHEL
21	Aluminium Conductors  (a) Alind (b) VK Conductors (c) Bharat Conductors (d) Indian Aluminium Co. (e) Kuber (f) Krishna-MPCAB	28	GOD/DO Switch (Air break)  (a) Pactil (b) Jaipuria Brothers (c) Rashtriya (d) MEI (e) Haryana Elect Ind (HEI) (f) Atlas
29	Lightning Arrestors (a) Schneider (b) WC (c) Alpro International (d) Southern insulators	34	VCB/ACB/RMU  (a) HT VCB 11KV/RMU/ BUS  COUPLAR  (i) Schneider  (ii) ABB  (iii) Siemens
30	Cable Boxes Heat/Cold Shrinkable (a) Cabseal (b) Birla 3M (c) M-Seal (d) Reychem	35	(b) LT ACB (i) Schneider (ii) Crompton Greaves (iii) ABB (iv) Controls & Switch gear (v) L&T

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31	Servo Voltage Stabliser  (a) Vinitec  (b) Brentford  (c) Automatic Electric	36	(c) HT OCBs  (i) Crompton Greaves  (ii) Seuthern Switch Gear  (iii) Areva T & D India Ltd  (iv) Easun  (v) MEI
32	PCC Poles (a) M/s Concrete Udyog, Jhansi (b) M/s Mohan Concrete Udyog Lucknow (c) M/s Shree Ambay Concrete Fabs, Lucknow (d) M/s Hindustan Pre-stressed concrete Structure Faridabad	37	(a) Pragati (b) CROMPTON GREAVES (c) Prayag (d) Elect Control & System (e) AE
33	Steel Tubular poles  (a) National tubing Co. Kanpur  (b) BCW Kanpur  (c) All India Small Scale tubular  pole manufacturers association,  Kanpur  (d) United Engineers, Kanpur  (e) M/s Sohan Lal & Sons	38	Change Over Switch  (a) Havells (b) HPL India (c) Controls & Switchgears (d) CROMPTON GREAVES (e) Zeta Switchgear

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