

PUBLIC WORKS DEPARTMENT

TECHNICAL EDUCATION DIVISION,VELLORE.

NAME OF WORK : Construction of Additional Three Class Room at Firtst floor of Zoology Department Building in Ariganr Anna Government Arts College at Villupuram in Villupuram District (MP LAD FUND).

SL NO	QUANTITY	DESCRIPTION OF WORK	TNBP NO	NBC NO	RATE IN FIGURE & WORDS	UNIT	AMOUNT
1	4.00 M ³ [Four cubic metre]	Dismantling Reinforcement Cement Concrete clearing away and carefully stacking materials useful for re-use for any thickness of walls etc., complete complying with standard specification and as directed by the departmental officers.	Spl	18		1 m3 [One cubic metre]	
2	17.00 M ³ [Seventeen cubic metre]	Dismantling Brick Masonry in cement mortar walls, clearing away and carefully stacking materials useful for re-use for any thickness of walls etc., complete complying with standard specification and as directed by the departmental officers.	Spl	18		1 m3 [One cubic metre]	
3		Providing two legged scaffolding using 15 cm dia casuarinas post of 4 m over all length etc., complete.					
a)	65.00 Rm [Sixty five Running metre]	Initial height of 3m				1 Rm [One Running meter]	
b)	65.00 Rm [Sixty five Running metre]	Additional height of every 2.50m				1 Rm [One Running meter]	
4	241.00 M ² [Two hundred and forty one square metre]	Chipping of concrete and roughening the surface, clearing away and carefully stacking materials useful for re-use for any thickness of walls etc., complete complying with standard specification and as directed by the departmental officers.				1 m2 [One square metre]	

5		<p>Providing and laying in position, Standardised Concrete Mix M-20 Grade in accordance with IS:456-2000, using 20mm and down graded hard broken granite stone jelly for all RCC items of works with minimum cement content of 325 Kg/m³ and maximum water cement ratio of 0.55, including admixture (Plasticiser/ Super Plasticiser) in recommended proportions as per IS:9103 to accelerate, retard setting of Concrete, improve workability without impairing strength and durability with about (5 cu.m) 7730 Kg of 20mm machine crushed Stone Jelly and with about (3.30 Cu.m) 5156 Kg of 10-12mm machine crushed stone jelly and with about (5.79 cu.m) 7670 Kg of M.sand, but excluding cost of reinforcement grill and fabricating charges, centering and shuttering and also including laying, vibrating with mechanical vibrators, finishing, curing etc., and providing fixtures like fan clamps in the RCC floor/Roof slab wherever necessary without claiming extra complete complying with standard specification and as directed by the departmental officers. The coarse and fine aggregate to be used should comply with requirement of IS standards. (No separate payment will be made by the Department for the excess usage of materials).</p>	Spl	18	
a)	68.00 M ³ [Sixty eight cubic metre]	For Super Structure in First Floor			1 m3 [One cubic metre]
b)	2.00 M ³ [Two cubic metre]	For Super Structure in Second floor			1 m3 [One cubic metre]

6	3.00 M ³ [Three cubic metre]	Cement Concrete 1:3:6 (One cement three M.sand and six aggregate) using machine crushed 40mm gauge hard broken granite stone jelly for Dummy Column connected to this work excluding cenetering, shuttering and cost of reinforcement grills placed in position, but including laying, vibrating, curing etc., complete complying with standard specification and as directed by the departmental officers. For Super structure in Second Floor.	Spl	18	1 m3 [One cubic metre]
7	96.00 Qtl [Ninety six quintal]	Supplying fabricating and placing in position of steel reinforcement using MS (or) RTS rods for all RCC item of works including cost of steel and binding wire in all floors etc. complete complying with standard specification and as directed by the departmental officers. (The contractor will have to make his own arrangements for the supply of M.S.plain rod / RTS rod and black binding wire).	97	VI	1 Qtl [One quintal]
8		Supplying and erecting centering for sides and soffits including necessary supports and strutting upto 3.29 M height for plane surfaces as detailed below in all floors with all cross bracings using Mild Steel sheets of size 90 x 60 cm and 10 BG stiffened with welded Mild Steel angle of size 25mm x 25mm x 3 mm for boarding laid over silver oak joists of size 10cm x 6.50 cm spaced at abote 90 cm centre to centre and supported by casurina props of 10cm to 13 cm dia spaced at not more than 75 cm centre to centre etc. complete complying with the standard specificaion. (Payment for centering shall be given after the concrete is laid)			
a	422.00 M ² [Four hundred and twenty two square metre]	Plane surfaces such as RCC floor slab, roof slab, rectangular, square Tee or Ell beam, lintel, bed block staircase waist slab, landing slabm landing beam, portico beam, portico beam, portico slab etc.,			1 m2 [One square metre]

b	201.00 M ² [Two hundred and one square metre]	Plane surface such as RCC square or rectangular column, top and bottom slab of sunshade, boxing sill slab etc., complete as directed.			1 m ² [One square metre]
9	245.00 M ² [Two hundred and forty five square metre]	Providing additional strutting using casurina poles to centering of RCC slabs or plane surfaces for every additional 1 metre height or part there of but not less than 30cm over the initial height of 3m etc., complete complying with standard specification and as directed by the departmental officer.			1 m ² [One square metre]
10		Brickwork in cement mortar 1:6 (One cement and six M.sand) using II Class Ground moulded Bricks 9"*4 3/8"*2 3/4" including finishing neatly and curing etc complete complying with standard specification (masonry projection wherever necessary for obtaining required elevation shall be done with out extra cost)			
a)	61.00 M ³ [Sixty one cubic metre]	For Super structure in First Floor	31C	V2 VI S.4 VII 3.4	1 m ³ [One cubic metre]
b)	23.00 M ³ [Twenty three cubic metre]	For Super structure in Second Floor	31C	V2 VI S.4 VII 3.4	1 m ³ [One cubic metre]
11	561.00 M ² [Five hundred and sixty one square metre]	Special ceiling plastering and finishing the exposed surface of RCC items of work such as slab, beam, sunshade, facia, canopy slab, staircase waist slab, landing slab etc., with cement mortar 1:3 (One cement and three P.sand) 10mm thick including hacking the surfaces and providing cement mortar nosing, beading for sunshade, staircase, step, landing slab neat and finishing and curing etc., complete complying with standard specification and as directed by the departmental officers.			1 m ² [One square metre]

12	731.00 M ² [Seven hundred and thirty one square metre]	Plastering with cement mortar 1:5 (one cement and five P.sand) 12mm thick in all floors using fine river sand including finishing, curing, etc., complete complying with standard specification and as directed by the department officers.	1 m2 [One square metre]
13	1576.00 M ² [One thousand five hundred and seventy six square metre]	Painting two coats of newly plastered wall surface with ready mixed Plastic emulsion paint of first class quality and of approved colour over a priming coat including thorough scrapping, clean removal of dirt, and including necessary plaster of paris putty, wherever required etc., complete complying with standard specification.	1 m2 [One square metre]
14	251.00 M ² [Two hundred and fifty one square metre]	Finishing the top roof with one course of Solar reflective ceramic tiles of size 305x305x7mm thick of approved quality set in cement mortar 1:3 (One cement and three sand) (12mm thick) and mixed with for 10M2 4.00 kg Epoxy Packing conforming to ISS including curing etc., complete complying with standard specification and as directed by the Departmental officers.	1 m2 [One square metre]
15	24.00 Rm [Twenty four Running metre]	Supplying and fixing in position best approved of ISI quality of 110mm diameters of PVC rain water down fall pipes having a working pressure of 4 kg / sq.cm including cost of necessary PVC shoe, PVC bend, C.I. gratings of required diameter and special clamps, brass screws, nails etc., and fixing of cast iron gratings at junction of parapet and the RCC roof slab including finishing, neatly etc., complete. The rate shall be inclusive of cost of removable iron grating. The PVC pipe shall be fixed in wall with special type of clamps. Special type "U" clamp at the centre of the pipe line shall be fixed in addition to those for more than 3.0M pipe length complying with standard specification.	1 Rm [One Running meter]

16	12.00 Rm [Twelve Running metre]	Supplying and fixing in position 'B' Class GI pipes of size 50mm for holding the AC sheet roof including dismantling the masonry etc. wherever required to fix the pipe and making necessary holes in G.I. pipes for fixing the clamps and bolts including cutting, welding and pointing the G.I. pipe with two coats of SEP over one coat of primer and making good the damaged portions to the original conditions etc., complete complying with standard specification and as directed by the departmental officers.	1 Rm [One Running meter]
17	23.00 M ² [Twenty three square metre]	Supplying and fixing of Galvalum sheet precoloured 0.48 mm thick for roofing of best approved quality with required size with ridge sheet with necessary self tapping nylon washers and bolts including the sheet to the required size for found necessary during execution etc., complete complying with standard specification and as directed by the departmental officer. (The G.I Precoloured sheet should be got approved by the Engineer-in- charge before use on works)	1 m2 [One square metre]
18	257.00 M ² [Two hundred and fifty seven square metre]	Paving the flooring with Stain Free Nano Polish vitrified tiles of approved quality and colour of size 610 x 610 x 8mm for flooring in all floors over a base layer of cement mortar 1:3 (one cement and three M.sand) 20mm thick and pointing with white cement using 0.30kg/m2 of white cement including adding suitable colour pigments to suit the colour of tiles finishing perfectly and curing as directed by the Departmental officers including cost of tiles, all materials and incidental charges, transportation charges and labour charges for laying tiles etc., complete complying with standard specification and as directed by the Departmental officers. (The tiles should be got approved by the Departmental officers before use on works).	1 m2 [One square metre]

19	21.00 M ² [Twenty one square metre]	Paving the floor with Pre-polished anti-skid step tiles (Required shape and design) of 10 mm thick of approved quality and colour laid in Cement Mortar 1:3 (One Cement and Three M.sand) 20mm thick and pointed with white cement mixed with colouring pigment at the rate of 0.40 Kg. / sq.m., curing, etc., complete complying with standard specification and as directed by the departmental officers. (The make and brand of the tiles should be got approved by Executive Engineer before use on works)	1 m2 [One square metre]
20	23.00 Rm [Twenty three Running metre]	Fabricating supplying and fixing in position CRCA pressed steel box section 18 gauge or 1.25mm thick for door frames of section size 105mmx60mmx1.25mm thick with necessary rebate of size 35x15mm for housing door shutters conforming to IS specification. Frames shall be fabricated to the specified door size with joints properly welded and grinded. Stiffeners with 25x3mm MS flat shall be provided around the frame at 60cm intervals. The cost shall also include for providing 3 Nos. of MS clamps with 25x3 flats each on either sides of door frame, providing bottom tie, with 10mm dia MS rod, providing necessary holes for receiving tower bolts 2 Nos. with stiffeners on inner side, providing the required number of I.O hinges of size 125x30mm for shutters properly welded to the frames, finishing the door with one coat of good quality red oxide primer with cement concrete 1:2:4 (One cement, two sand and four aggregate) using 20mm gauge hard broken granite stone jelly packed inside to the frame including cost of all materials, fabrication and conveyance to the site and fixing in position with necessary scaffolding etc., complete complying with standard specification and as directed by the departmental officer.	1 Rm [One Running meter]

21	7.00 M ² [Seven square metre]	<p>Supplying and fixing in position of 35mm thick solid core flush door shutters double leaf with TW ply on both sides and with TW lipping of size 35x12mm on all edges with necessary adhesives and C.P. Screws. Alu. Butt Hinges (6 nos. 250 x 16 mm Size), Alu. Aldrop 1 No. 250 x 16 mm Size, Alu. Tower Bolt 2 No. 250 x12 mm size, alu. Tower Bolt, 1 No. 200 x 12 mm size, D type alu. Handle 2 Nos, 2 Nos. of 200mm length alu. door stopper with rubber bush shall be provided, as directed by the departmental officere,etc.,complete.</p> <p>Double leaves.</p>	1 m2 [One square metre]
22	27.00 M ² [Twenty seven square metre]	<p>Manufacturing, supplying and fixing in position of M.S.Steel Window with following specifications. The outer frame of window made out "Z" section (F7D) of size 33x25x3mm at 1.419 Kg/m and mullion of "J" section (F4B) of size 45x25x3mm at 2.28 Kg/m. shutter made out of (F7D) section of size 33x22x3mm at 1.419 Kg/m. Each openable shutter should not be exceeded a width 600mm to enable separate operations and easy maintenace. 2 Nos of sturdy hinges and one number of handle cum latch of special type make with 18x5 MS flat are revetted to the shutters of an appropriate height in the each window shutter. Suitable opening is left for its easy operation. A stopper square rod for handle is provided in the mullion section at suitable place to catch the window handle. Each shutter having on adjustable window stay made out of 18mmx5mm at 0.70 kg/m MS flat of length 320mm with free adjustable positions.</p>	1 m2 [One square metre]

A matching peg is provided in the outer frame of the window, at suitable place, 4 Nos of holdfasts of 200mm length MS angle 40x40x6mm the ends are welded to the outer frame of the window, 18mmx5mm at 0.70 kg/m MS flat is welded to the shutter at the two place, equal distance from each other from top & bottom of the shutter 18 gauge cold rolled sheet of superior quality is laid as panel in the shutter frames & welded intact. All sections used should confirm to IS 7542/1990. The rate includes cost of all materials, labour charges, transportation to taxes and other incidental charges etc. complete.

Three Leaves.

23	3.00 M ² [Three square metre]	Manufacturing, Supply and Fixing of steel doors of size 1.2mx2.1m with following specification. MS angles of size 40x40x 6mm at 3.5 kg/m used for the outer frame and MS angles of size 35x35x5mm at 2.60 kg/m for the shutter frames. Stiffners with 32x6mm at 1.50 Kg/m. MS flat is provided as the lock rail of the door and welded infact of both ends to the shutter frame, 18 gauge CR sheets of best quality is laid as panel in the shutter frames. 18x5mm at 0.70 kg/m MS flat is welded over the 32x6mm at 1.50 Kg / RM and MS flat on the rear side of the door sandwiching the CR sheet for rigidity with locking rail and bottom tie arrangements. Additional stiffners with 18x5 mm at 0.7 kg/m MS flats are provided horizontally diagonally on the rear side of the shutter. 2Nos of hinges in case of single leaf and 4Nos of hinges in case double leaf shutter is provided 6 Nos of hold fasts 200 length 40x40x6mm M.S. angle spliced at the ends are welded to the outer frame of the door. M.S Tower bolt 2 Nos. one at top and the other at bottom are provided.	1 m2 [One square metre]
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One aldrop is provided incase of double leaves door at lock rail section in the door. For single leaf doors, one more aldrop is provided in the inner side at the lock rail section of the door. One rotating locking arrangements at the inner side of the door and additional provision for locking arrangements for lock is provided with 32x6mm MS flat on the rear side of the door at an appropriate place. A tie bar is provided at the bottom of the outer frame to prevent twisting of frame during transportation of fixing. All members are given a shop coat of red oxide primer as directed by the departmental officers. The rate includes cost of all materials labour charges transportation taxes and all other incidental charges etc., complete.

Single Leaf.

24	1209.00 kgs [One thousand two hundred and nine Kilograms]	Supplying and fixing of approved M.S Grills for doors,windows,open courtyard, grill gate etc., using necessary mild steel flats for inner and outer members which should be fixed on edges including priming coat of best approved quality red oxide primer etc., complete complying with standard specifications.	23 & 24	VI (S2) 2.2 6.1.4 7.1.13 to 8.1	1 Kg [One Kilogram]
25	6.00 M ² [Six square metre]	Supply and fixing of RCC Jally with 50mm thick of of approved pattern exclusive of reinforcement but inclusive of moulding charges, fixing, pointing, finishing to the true alignment, curing, etc., complete.			1 m2 [One square metre]

26	7.00 M ² [Seven square metre]	Supplying and Fixing in position steel balustrades using 20mm square rods at 150mm c/c and two balustrades in a single step centrally located and top welded with M.S. flats 40x6mm for fixing with the M.S.hand rails having a groove 40x6mm and bottom fixed in the step concrete firmly M.S.flat of size 50x6mm to be provided at the Centre of balustrades connecting all square rods of size 20mm fixing at 15cm c/c to the entire length of the balustrades welding all faces intact including one coat of primer anti corrosive paint for the square rods and flats etc., complete complying with standard specification and as directed by the departmental officers.	1 m2 [One square metre]
27	10.00 Rm [Ten Running metre]	Supplying and fabricating and fixing in position 50mm dia GI pipe 'B' class for hand rails on the flats of steel balustrades including cutting the pipe to the required length and shape grinding the edge smooth welding wherever necessary as directed by the departmental officers including cost of one coat red oxide primer as directed by the departmental officers etc., complete complying with standard specifications. The rate includes cost of GI pipe, taxes and labour charges for fixing in position.	1 Rm [One Running meter]
28	115.00 M ² [One hundred and fifteen square metre]	Painting new iron works with two coats of best approved first quality and colour of synthetic enamel paint over the existing red oxide priming coat in all floors excluding cost of priming coat etc., complete complying with standard specification and as directed by the departmental officer. (The make quality and colour of paint should be got approved by the Engineer before use on work).	1 m2 [One square metre]

29	16.00 M ² [Sixteen square metre]	Painting new wood works two coats with best approved first quality and colour of synthetic enamel paint over a priming coat of approved quality and colour in all floors etc., complete complying with standard specification and as directed by the departmental officers. (The make quality and colour of paint should be got approved by the Engineer before use on work).				1 m2 [One square metre]
30	11.00 M ² [Eleven square metre]	Supplying and installation of Ceramic Steel chalk writing board with the following specification. The 2mm GI Sheet is placed with wall side over the GI sheet necessary adhesive is spreaded and fixed the 9mm MDF board on the GI sheet 0.40mm thick ceramic steel chalk board is provided over the MDF board and the whole arrangements are fixed to the frame using heavy anodized Aluminium section and Chromium plated provided in the corners. The whole arrangement are fixed to the wall using wooden plugs and screws etc., The rate includes all above materials, labour charges and taxes etc., complete complying with standard specification and as directed by the departmental officers.				1 m2 [One square metre]
31	3.00 Nos [Three numbers]	Supplying and fixing of good quality and best make of Chalk Piece and Duster Holder of size 300 x 200mm made up of stainless steel in the places shown by the departmental officers including transporting to the work site, fixing in position etc., complete complying with standard specification.	23 & 24	VI (S2) 2.2 6.1.4		1 No [One Number]

Total Items :31 (Thirty one items only]

**GST 12%
Total**

Executive Engineer, PWD.,
Technical Education Division,
Vellore - 632 002.