



सत्यमेव जयते

भारत सरकार
Government of India



केन्द्रीय लोक निर्माण विभाग
CENTRAL PUBLIC WORKS DEPARTMENT

कुर्सी क्षेत्र दरें PLINTH AREA RATES 2021

DIRECTOR GENERAL, CPWD, NIRMAN BHAWAN, NEW DELHI



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PLINTH AREA RATES 2021

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FOREWORD

Plinth Area Rates published by CPWD is a useful technical document for preparation of preliminary cost estimate of projects and development works by engineers in construction industry. This publication is not only being used by CPWD but also by other organizations, PSUs, builders, architects and valuation experts.

Plinth Area Rates was last published in 2020. It has become necessary to revise it to align the GPRA specifications with the latest housing up-gradation norms of MoHUA, to synchronize plinth area calculation method with provisions of IS 3861:2002 and also to incorporate useful suggestions by field units and other stakeholders. Hence, this updated version of Plinth Area Rates is published as Plinth Area Rates 2021.

I wish to place on record the commendable work done by Shri Dharmesh Chandra Goel, Addl. Director General (Technical), Shri Vinayak Rai, Chief Engineer (CSQ), Shri Divakar Agrawal, Superintending Engineer (TAS), Shri S N Jaiswal, Executive Engineer (CSQ), Shri Mukesh Varma, Chief Estimator (CSQ) and CSQ team in bringing out the Plinth Area Rates 2021 in short time.


(Vinit Kumar Jayaswal) 01.07.2021



Dharmesh Chandra Goel
Additional Director General (Technical)



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PREFACE

1. Plinth Area Rates published by Central Public Works Department is one of the most comprehensive and useful technical document used by CPWD, PWDs, Other Govt. Departments, PSUs, Builders, Engineers and Valuation officers for preparation of Preliminary Estimates and Rough Cost Estimates for Offices / Colleges / Schools / Hostels / Hospitals and Residential Buildings. This latest updated version of Plinth Area Rates 2021 is 10th edition since 1955.
2. CPWD field units and others in the construction sector have accustomed themselves with the changed format of PAR 2020. This edition is updated as per plinth area norms approved by MoHUA in August 2013 synchronized with up-gradation norms approved by MoHUA in March 2018. Plinth Area calculation guidelines have been synchronized with IS:3861-2002 for uniformity and clarity.
3. The per unit area rates for all categories of building have been revised as per prevailing cost index of 105 as on 01.04.2021 over PAR 2020 with base 100 as on 01.04.2020. The rates of various extras and development charges have been revised as per Delhi Schedule of Rates 2021.
4. Plinth Area Rates 2021 mandates that concerned Architectural unit shall work out the floor wise plinth area and compile the same to obtain building wise abstract of plinth area. The guidelines are explained in Annexure-II and proforma are provided in Annexure-III(a), III(b), III(c) which are self-explanatory so as to minimize discrepancies.
5. The Plinth Area Rates-2021 (with base 01.04.2021 as 100) comprises of following Annexure:
Annexure-I: Specifications for Residential Buildings, Scale of Amenities, Scale of Sanitary & Water Supply fittings and Electrical installations in GPRA and Specifications for Non- Residential Buildings.
Annexure-II: Guidelines for calculating Plinth Area.
Annexure-III: Proforma for Plinth Area calculation by Architectural unit
Annexure-IV: Proforma for calculating cost index for future Cost indices with base 100 as on 01.04.2021.
6. All efforts have been made to update Plinth Area Rates-2021 to make it user friendly by incorporating the views and feedback from various stakeholders and the field units and making necessary simplifications.
7. I would like to acknowledge the lead taken by Sh. Vinayak Rai, Chief Engineer, CSQ(Civil), Sh. MV Chalapathi Rao, Chief Engineer CSQ (Elect.) and dedicated efforts of Sh. Divakar Agrawal, SE(TAS), Sh. S.N. Jaiswal, EE(TAS), Sh. D.S. Adhikari, AE(TAS), Sh. Patta Madhu kumar, AE(TAS), Sh. Mukesh Varma, Chief Estimator (Civil), Ms. Anshu Shukla AE (TAS), Sh. Akhileshwar Sah, Chief Estimator, Sh. Naveenkumar P, JE (Civil) and Sh. Chalapaka Ramaraju, JE(Civil) of CSQ who have provided valuable inputs/data in finalization of Plinth Area Rates-2021.

Dharmesh

Dharmesh Chandra Goel
ADG (Technical) CPWD

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PLINTH AREA RATES
as on 01.04.2021

					Rate in ₹ per sqm
S. No.	Description	Non-Residential Buildings			Residential Buildings
		Offices/ Colleges	Hospitals	Schools	Hostels/Quarters
1.0	BUILDING COST (Specifications as per Annexure-I)				
1.1	RCC FRAMED STRUCTURE (Upto six storeys)				
1.1.1	Floor height 3.60 meter	27,090	28,455	21,735	-
1.1.2	Floor height 3.00 meter	-	-	-	20,685
1.2	COMPOSITE (PARTIALLY LOAD BEARING AND PARTIALLY RCC FRAMED) STRUCTURE (Upto six storeys)				
1.2.1	Floor height 3.60 meter	22,995	24,150	18,690	
1.2.2	Floor height 3.00 meter	-	-		17,640
1.3	EXTRA FOR				
1.3.1	Set of six additional storeys (i.e. from 7 th to 12 th storey)	105			
	Similarly, extra for next set of six storeys may be increased by Rs. 105/- per sqm (viz Rs. 210/- per sqm for 13 th to 18 th storey, Rs. 315/- per sqm for 19 th to 24 th storey, Rs 420/- per sqm for 25 th to 30 th storey and so on). The applicable plinth area shall be the sum of plinth area of all the storeys within the set of six storeys. If the next set of storeys is having fewer than six storeys, the same procedure shall be followed. For example, if building is having 15 storeys, the additional rate applicable shall be (i) Rs 105/- per sqm for sum of plinth area between 7 th to 12 th storey and (ii) Rs. 210/- per sqm for sum of plinth area of 13 th to 15 th floor.				
1.3.2	Every 0.3 meter or part thereof, additional / less height of floor above normal floor height of 3.60 meter / 3.00 meter (on areas having additional / less height).	370			
1.3.3	Every 0.3 meter or part thereof, higher plinth height over normal plinth height of 0.60 meter (on ground floor area only).	370			
1.3.4	Every 0.30 meter or part thereof, deeper foundations over normal depth of 1.20 meter (on ground floor area only).	200			
1.3.5	Making stronger foundations to take load of one additional floor at a later date (on ground floor area only).	For RCC framed structures			Composite structure
		1,600			620
1.3.6	RCC raft foundation (on ground floor area only).	10,700			
1.3.7	Pile foundation (on ground floor area only).	17,100			
1.3.8	Stronger structural members to take heavy load above 500 kg per sqm upto 1000 kg per sqm.	1,800			
1.4	BASEMENT FLOOR				
1.4.1	Floor height upto 3.35 meter including water proofing (excluding raft base).	20,750			
1.4.2	Add or deduct for every 0.30 meter, or part thereof, height against normal height of 3.35 meter.	1,000			
1.5	FIRE FIGHTING				
1.5.1	Downcomer System.	400			
1.5.2	With wet riser system.	800			
1.5.3	With wet riser and sprinkler system.	1,200			
1.6	FIRE ALARM SYSTEM				
1.6.1	Manual fire alarm system.	250			
1.6.2	Automatic fire alarm system.	600			

S.No.	Description	Non-Residential Buildings			Residential Buildings	
		Offices & Colleges	Hospitals	Schools	Hostels	Quarters
1.7	Pressurized mechanical ventilation system in the basements with supply duct of exhaust blowers (on areas where mechanical ventilation is required).	1,050				
1.8	STILT PORTION					
1.8.1	Stilt portion of multi-storey buildings upto floor height of 3.60 meter (on stilt area only)	8,400				
1.8.2	Every 0.30 meter additional height above 3.60 meter.	200				

2.0	SERVICES(Percentage below refers to the percentage of building cost as per 1.0 above)					
2.1	Internal water supply & sanitary installations.	4%	10%	5%	12% with attached toilets, 8% with common toilets.	9%
2.2	External service connections and local body approval charges shall be as hereunder or as per estimates given by the local body whichever is higher.					
2.2.1	Electrical external service connections.	3.75%	3.75%	3.75%	3.75%	3.75%
2.2.2	Civil external service connections.	1.25%	1.25%	1.25%	1.25%	1.25%
2.2.3	Local body approvals including tree cutting etc.	1.25%	1.25%	1.25%	1.25%	1.25%
2.3	Internal electric installations.	12.5%	12.5%	12.5%	12.5%	12.5%
2.4	EXTRA FOR					
2.4.1	Power wiring and plugs.	4%	4%	4%	4%	4%
2.4.2	Lightning conductors.	0.25%	0.25%	0.25%	0.25%	-
2.4.3	Telephone conduits.	0.25%	0.25%	0.25%	0.25%	-
2.4.4	Third Party Quality Assurance.	1%	1%	1%	1%	1%

S.No.	Capacity/ Persons	Speed in m/sec	Travel height	Price (₹in lacs)	Extra for each additional floor (in ₹)
3.0	LIFTS with power operated centre opening doors and AC variable voltage & variable frequency controls				
3.1	Passenger lifts				
3.1.1	8	1.0	G+4	16	90,000
3.1.2	8	1.5	G+5	18	90,000
3.1.3	13	1.0	G+4	18	90,000
3.1.4	13	1.5	G+5	20	90,000
3.1.5	16	1.0	G+4	24	1,10,000
3.1.6	16	1.5	G+5	26	1,10,000
3.1.7	16	2.5	G+12	70	1,10,000
3.2	Bed Lifts				
3.2.1	20	0.75	G+4	24	1,10,000
3.2.2	20	1.5	G+5	27	1,10,000

S.No.	Capacity/ Persons	Speed in m/sec	Travel height	Price (₹in lacs)	Extra for each additional floor (in ₹)
3.2.3	20	2.5	G+12	75	1,10,000
3.3	Goods lifts				
3.2.1	1 Ton	0.5	G+4	26	85,000
3.2.2	2 Ton	0.5	G+4	33	85,000
3.2.3	3 Ton	0.25	G+4	41	1,00,000
S.No.	Description				Rates in ₹
4.0	RCC WATER TANK				
4.1	Overhead tank without independent staging				20 per litre
4.2	Overhead tank with staging height upto 20 metres				30 per litre
4.3	Overhead tank with staging height above 20 metres upto 30 metres				35 per litre
4.4	Overhead tank with staging height above 30 metres upto 40 metres				40 per litre
4.5	Underground sump				20 per litre
5.0	DEVELOPMENT OF SITE				
5.1	Levelling				300 per sqm
5.2	Internal roads & paths				
5.2.1	Internal road with WBM and bituminous top				1,700 per sqm
5.2.2	Internal road with WMM and bituminous top				1,850 per sqm
5.2.3	Cement concrete pavement with vacuum dewatered concrete				2,040 per sqm
5.2.4	Footpath with PCC base, 60 mm thick paver blocks and kerb stone edging				2,600 per sqm
5.3	External sewerage				3,350 per metre
5.4	Filtered water supply				
5.4.1	Distribution lines upto 100 mm dia				1,700 per metre
5.4.2	Peripheral grid 150 mm to 300 mm dia pipes				3,600 per metre
5.4.3	Unfiltered water supply distribution lines				1,330 per metre
5.5	Storm water drains				8,920 per metre
5.6	Rain water harvesting (RWH)				3,350 per metre
5.7	Trenches for services				6,400 per metre
5.8	Boundary wall with 1500 mm high wall and 600 mm high MS grill including 2100 mm high steel gates at every 100 metres				
5.8.1	With brickwork structure and RCC band at ground level and coping				9,550 per metre
5.8.2	Precast RCC wall in M40 grade concrete comprising of T shaped 250 x 230 mm RCC posts fixed in ground and 70 mm thick RCC wall panel inserts				8,050 per metre
5.9	Horticulture Works				
5.9.1	Horticulture operations including 300mm earth filling, grassing, tree plantations/shrubs and potted plants etc.				275 per sqm
5.9.2	Vertical plantations				45 per sqm
6.0	SPECIALISED E&M WORKS				
6.1	33 kV RECEIVING SUBSTATION AND 33 kV/11 kV HT CABLING				
6.1.1	Supplying, installation, testing and commissioning of 33 kV substation comprising 33 kV HT panel, transformers 33kV/11 kV, 11 kV HT panel, inter connections, 11 kV HT underground cabling to the distribution substations on ring main system, substation earthing, substation safety equipment.				3,500 per kVA

S.No.	Description	Rates in ₹
6.2	SUB-STATION EQUIPMENT	
6.2.1	Supplying, installation, testing and commissioning of 33 kV/0.433 kV or 11 kV/0.433 kV substation equipment comprising HT panel, dry type/Oil type transformers, HT cable, bus trunking from transformer to LT panel, LT panels, automatic power factor correction panel, active harmonic filters, TVSS (transient voltage suppression system), SPD (surge protection system), essential panel, earthing, required inter-connections, substation safety equipments including LT cabling from substation to the buildings fed by the substation.	9,000 per kVA
	Note: For assessment of kVA estimation of a building, para 4.4, 13 and other relevant paras of “Guidelines for Substation & Power Distribution Systems of Buildings-2019” which is available on CPWD website may be referred to.	
6.3	GENERATING SETS	
6.3.1	Supplying, installation, testing and commissioning of DG sets, AMF panel, bus ducting/ cables from DG sets to essential panel, DG set enclosure room sound insulation/ventilation/smoke exhaust as required, earthing of DG set system, control cabling, fuel tank/piping, DG set exhaust piping/ exhaust chimney as per CPCB norms, civil works connected with DG sets including foundation as required.	10,000 per kVA
6.3.2	Extra for synchronizing panels wherever required	1,000 per kVA
6.4	UNINTERRUPTED POWER SUPPLY	
6.4.1	Supplying, installation, testing and commissioning of online 3 phase UPS system with 30 minutes back up including batteries, interconnecting cables, battery racks etc.	20,000 per kVA
6.4.2	Add for every additional 30 minutes backup	9,000 per kVA
6.5	CENTRAL AC PLANT	
6.5.1	Supplying, installation, testing and commissioning of energy efficient central AC plant including low side works	85,000 per TR
6.5.2	Extra for stand-by chilling units high side	38,000 per TR
6.6	VRV/ VRF AC System	
6.6.1	Supplying, installation, testing and commissioning of VRV/VRF system including indoor /outdoor units, piping, electrical power distribution/wiring, electrical panel, treated fresh air system etc.	55,000 per HP
6.7	PRECISION AIRCONDITIONING SYSTEM	
6.7.1	Supplying, installation, testing and commissioning of precision air conditioning system including piping, electrical cabling, controller etc. required for the system	1,10,000 per TR
6.8	SOLAR PHOTO VOLTAIC POWER GENERATION SYSTEM	
6.8.1	Supplying, installation, testing and commissioning of grid interactive roof top solar photo voltaic power generation system including space frame	55,000 per kWp
6.9	SOLAR WATER HEATING SYSTEM	
6.9.1	Supplying, installation, testing and commissioning of solar water heating system with heat exchanger type including electrical heater backup, make up water tank but without piping – 100 litres capacity	22500 per 100 litre
6.9.2	For higher capacity in multiples of 100 litres.	22,500 per 100 litre
6.10	CCTV SYSTEM	
6.10.1	Supplying, installation, testing and commissioning of IP based CCTV system for building security comprising of PTZ / fixed camera, cabling, digital recording , HD display system with minimum display of 5” x 8” per camera and hard ware software support – for indoors only {Rate applicable on total plinth area but CCTV coverage shall be limited to 15% of the total plinth area as per requirement}	200 per sqm
6.10.2	For external surveillance (Rate applicable on total plot area minus plinth area at ground floor)	200 per sqm

S.No.	Description	Rates in ₹
6.11.1	ACCESS CONTROL SYSTEM	
	Supplying, installation, testing and commissioning of access control system for building security comprising of controller, E&M locks, reader, smart cards, cabling, recording, display system, hardware and software support as required (Rate applicable only on plinth area of high security area in the building)	200 per sqm
6.12	IBMS: INTEGRATED BUILDING MANAGEMENT SYSTEM	
6.12.1	Supplying, installation, testing and commissioning of integrated building management system for digital/electronic display and monitoring of all E&M systems like substation, DG sets, UPS, solar power, lifts, AC plants, ventilation systems, fire protection systems, pumps etc. to include cabling, monitors, recording, display system, hardware, software support (upto 10,000 sqm) (Rate applicable on total plinth area)	400 per sqm
6.12.2	Add extra for built up area above 10,000 sqm (Rate applicable on total plinth area)	125 per sqm
6.13	HYDROPNEUMATIC WATER SUPPLY SYSTEM	
6.13.1	Supplying, installation, testing and commissioning of hydro pneumatic water supply system consisting of pumps, pneumatic tank, microprocessor based control panel, VFD, inter connecting pipes, valves, cabling, switchgear etc. as required	1,500 per LPM
6.14	LIGHTING AUTOMATION INCLUDING OCCUPANCY SENSORS	
6.14.1	Supplying, installation, testing and commissioning of lighting automation including occupancy sensors (Rate applicable on area to be specified by client)	200 per sqm
6.15	BASIC HOME SECURITY FOR RESIDENTIAL COLONY	
6.15	Supplying, installation, testing and commissioning of basic security system in the residential colony to include control room at the gate and intercom connection to each dwelling unit, and basic IP based CCTV system to be installed at the entry and exit points, parking areas, entry point of each dwelling unit and other common areas as required including CCTV control room, required under ground cabling, digital recording system and monitor/ monitors with minimum display of 5" x 8" per camera in the control room:	
6.15.1	Intercom system (Rate applicable on plinth area excluding service/common areas).	300 per sqm
6.15.2	CCTV system (Rate applicable on plinth area excluding service/common areas).	300 per sqm
6.16	LAN SYSTEM	
6.16.1	Supplying, installation, testing and commissioning of LAN system comprising of core switches & L2 switches with 10 G, 10 giga SFP modules, WIFI access points, WIFI controller, network management software, racks, CAT 6A cable, patch panels, OFC etc. (Rate applicable on plinth area excluding service/common areas).	500 per sqm
6.17	IP BASED EPABX SYSTEM	
6.17.1	Supplying, installation, testing and commissioning of IP based EPABX system comprising of core switches & L2 switches with 10 G, 10 giga SFP modules, industry standard appliance server, cloud-based, enterprise-grade UC solution, MID/ENTRY level IP/SIP phone with, dual 1 gig ports, racks, CAT 6A cable, patch panels, OFC etc. (Rate applicable on plinth area excluding service/common areas).	500 per sqm
	NOTE: It will be economical to use common infrastructure of switches, OFC, CAT 6A cable for both voice and networking.	
6.18	Conference hall: supplying, installation, testing and commissioning of audio visual/conference system (Rate applicable on carpet area of Hall only)	10,000 per sqm
6.19	STREET LIGHTING WITH LED	
6.19.1	Supplying, installation, testing and commissioning of LED street/ compound/ high mast/ pathway/ landscape lighting for the entire campus (Rate applicable on total plot area).	150 per sqm
	Note: This is applicable for plot sizes more than 1 acre. For smaller plot sizes actual requirements may be worked out	

S.No.	Description	Rates in ₹
	Note:- Cost for general façade lighting, if required, with IP 66/67 LED fixtures (RGB/Tunable/Mono) along with controls (hardware and software) and cabling may be assessed on case to case basis.	
6.20	STP/ETP PLANT	
	Supplying, installation, testing and commissioning of STP/ETP of appropriate technology including civil works (except plant room), tertiary treatment etc. for the building/ campus	
6.20.1	Plant size upto 50KLD	75,000 per KLD
6.20.2	Add extra for every KLD for plant size above 50 KLD and upto 100 KLD	60,000 per KLD
6.20.3	Add extra for every KLD for plant size above 100 KLD	50,000 per KLD
6.21	DRIVER FACE AND AUTOMATIC NUMBER PLATE RECORDING SYSTEM/RECOGNITION SYSTEM	
6.21.1	Supplying, installation, testing and commissioning of driver face and automatic number plate recording system / recognition system including high resolution camera and software set for the driver face capture and automatic number plate recording	7,25,000 per set
6.22	BAGGAGE SCANNERS	
6.22.1	Baggage scanner small: computer based multi energy X-Ray baggage inspection system mounted on castor wheels capable of passing through bags of dimensions 540 mm (W) x 350 mm (H), belt height 750 mm to 850 mm, 22"/24" LCD Monitor, Input / Output rollers with frames etc. as required.	21,25,000 per unit
6.22.2	Baggage scanner big: computer based multi energy X-Ray baggage inspection system capable of passing through bags/parcels of dimension 940mm (W) x 640mm (H) with Belt Height- 750mm-850mm with 22"/24" LCD Monitor, Input/ Output rollers with frames etc. as required.	35,00,000 per unit
6.23	DOOR FRAME METAL DETECTOR	
6.23.1	20 zone or above door frame metal detector nominal size: 760 mm (W) x 2050 mm (H) x 700 mm (D) loaded with necessary software	3,50,000 per set
6.24	MEDICAL GAS PIPELINE SYSTEM	
6.24.1	Medical gas pipeline system (as per international standards) comprising of oxygen, carbon dioxide, nitrous oxide, AGSS, Air-4, Air-7, vacuum outlets, manifolds, pressure alarms, fully automatic gas control system, bed head panels, copper piping, cylinder banks, plant equipment such as compressors, vacuum pumps etc.	60,000 per bed
6.25	MODULAR OPERATION THEATER	
6.25	MOT comprising of walls & ceiling system for operating area, steel framework, static dissipative flooring, laminar flow, double dome OT light, touch screen surgeon's control panel, scrub station, X-Ray viewing screen, hatch box, automatic sliding doors, anesthesia pendent, surgeon pendent etc.	
6.25.1	With stainless steel technology	85,00,000 per OT
6.25.2	With SMS technology	1,25,00,000 per OT
	Note: The above rates are based on minimum OT size of 50 sqm	
6.26	BOOM BARRIER	
6.26.1	Electromechanical boom barrier with all accessories upto 6 meter length.	1,25,000 each
6.27	CAR PARKING SYSTEM	
6.27.1	Sensor based car parking system with controller, display etc. as required. (cost based on minimum car capacity of 250)	10,000 per car
6.28	EMERGENCY LIGHT & ILLUMINATED SIGNAGES	
6.28.1	Illuminated signages (Rate applicable on total plinth area)	20 per sqm

S.No.	Description	Rates in ₹
6.29	Motorized steel gates upto 6.00 metre width	5,00,000 per gate

Notes:

- 1) The rates are inclusive of CP & OH, GST and Labour Welfare Cess (any other cess / levy imposed by local Government shall be added separately).
- 2) If it is not feasible to compute the area or length of development components from item no. 5.1 to 5.7, the cost of these components may be worked out as below on the basis of percentage of building cost as per serial number 1.0.

2.1	Compact site, comprising of a single huge area building with a few ancillary buildings around or few blocks of high rise (higher than 12 storeys) building blocks in close cluster.	= 4.5% of building cost
2.2	Semi compact/semi scattered site comprising of few blocks of mid rise (between 6 to 12 storeys) buildings in a gated compound.	= 6.0% of building cost
2.3	Large site comprising of various scattered low rise (upto 4 storey) buildings with exception of a block or two upto 6 storeys.	= 7.5% of building cost

- 3) Cost of the following development works are not included in these rates.
 - a) Tube wells, pumps, open wells, treatment plant, extension of lines from source of local bodies, head works at water source etc.
 - b) Sewage pumps, sewage treatment plants, septic tanks, extension of outfall sewer upto point of disposal etc.
- 4) Provision for Specialized E&M services if required may be made as per 6.0 above.
- 5) Concealed wiring shall be used in all electrical works
- 6) The rates for the following green measures are already included for civil & electrical works -
 - a) Over deck insulation and application of high SRI reflective paint on thereof.
 - b) Masonry work in super structure with autoclave aerated concrete (AAC) blocks/ fly ash bricks.
 - c) Window with reflective glass coating / high performance coatings / double glazed unit.
 - d) Paints with low VOC options.
 - e) Provision of pillar cock having infrared sensor and foam flow technology along with provisions of online water filter for sediment free water from terrace tank outlet or the distribution line.
 - f) Dual plumbing system.
 - g) LED light fixtures.
 - h) BEE certified 5 star rated fixtures.

GENERAL SPECIFICATIONS FOR RESIDENTIAL BUILDINGS

S.No	Description	Latest Applicable Specifications				Remarks
		Type-II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII /Bungalows	
1	FOUNDATION					
	Foundation & structure	As per structural requirements	Same as Type II & III	Same as Type-II & III	Same as Type-II & III	The design shall vary as per soil conditions
2	SUPERSTRUCTURE					
	For multi-storey RCC framed structure	RCC frame & filler walls of autoclaved aerated cement concrete (ACC) blocks / brunt clay FPS / fly ash bricks.	Same as Type-II & III	Same as Type-II & III	Same as Type-II & III	Any other energy efficient suitable locally available material in consultation with architect and structural engineer.
	For composite structure (partially load bearing & partially RCC framed structure)	Autoclaved aerated cement concrete (ACC) blocks / brunt clay FPS / fly ash bricks	Same as Type-II & III	Same as Type-II & III	Same as Type-II & III	Any other energy efficient suitable locally available material in consultation with architect and structural engineer.
	Internal Partition	Half brick thick masonry in autoclaved aerated cement concrete (ACC) blocks / brunt clay FPS / fly ash bricks.	Same as Type-II & III	Same as Type-II & III	Same as Type-II & III	Any other energy efficient suitable local material in consultation with architect and structural engineer.
	Sunken floor for toilets with four course water proofing treatment	Sunk recess in RCC floor of required size and depth for floor trap and W.C. traps	Same as Type-II & III	Same as Type-II & III	Same as Type-II & III	
3	DOORS AND WINDOWS					
	a) Frames(except of toilet/bath& WC)					
	i) Door	Chemically Treated Hard wood / seamless mild steel tubular frame(with Hot Dip GI Coating) with minimum wall thickness of 2.0 mm. The external entrance door frame will have double rebate or sub frame for double doors i.e. main door and safety grill door with SS 304 wire(Powder Coated) mesh. For internal doors single rebate frames.	Same as type-II & III	Same as type-II & III	2 nd class teak wood frame work for external entrance having double rebate for double doors i.e. main door and safety grill stainless steel door with stainless steel wire mesh. For internal doors 2 nd class teak wood / uPVC extruded frame sections with minimum wall thickness of 2 mm in single rebate.	
	ii) Window	Chemically Treated Hard wood / uPVC extruded frame sections with minimum wall	Same as type-II & III	Same as type-II & III	2 nd calls teak wood / uPVC extruded frame sections of minimum wall	

S.No	Description	Latest Applicable Specifications				Remarks
		Type-II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII /Bungalows	
		thickness of 2.0 mm / powder coated or colour anodized aluminum extruded tubular sections/ engineered wood sections along with the provision of sub frame of suitable material.			thickness of 2 mm / powder coated or colour anodized aluminum extruded tubular section having double rebate / three tracks sliding system for glazed shutters and wire mesh shutters	
	iii) Doors & windows of toilet/bath / WC	Chemically Treated Hard wood / uPVC extruded frame sections with wall thickness minimum 2.0 mm / FRP / PVC, compatible to doors shutters	Same as Type-II & III	Same as Type-II & III	2 nd class teak wood/uPVC / extruded frame sections with wall thickness minimum 2.0 mm / WPC of density 750 to 1000 kg per cum, compatible to doors shutters	
	iv) Door /window frames in domestic help's area	Not admissible to Type-II, II and III	For domestic help's quarters same as Type-II to III	For domestic help's quarters same as Type-II to III	For domestic help's quarters same as Type-II to III	
b) Shutters						
	i)Main door/ external door shutters	Double shutters, one mild steel (Hot Dip Galvanized) grill door with mosquito proof stainless steel wire mesh of SS-304 grade (Powder Coated), painted and other 35 mm thick factory made flush door shutter both side commercial veneered and painted. (including necessary lipping)	Same as Type-II to III except the flush door having decorative veneering on both side with melamine polish.	Double shutters one safety grill single / double leaf door in SS-304 L grade frame with mosquito proof stainless steel wire-mesh of stainless steel -304 grade (Powder Coated) and stainless steel fittings and other with 35mm thick factory made exterior grade both side decorative veneered type flush door shutter with melamine polish. (including necessary lipping)	Same as Type-V & VI	
	ii) Domestic help's area	Not admissible to Type-II and III	For domestic help's quarters same as Type-II to III.	For domestic help's quarters same as Type-II to III.	For s domestic help's quarters same as Type-II to III.	
	Bath, WC & toilet door	25 to 30 mm thick, FRP / PVC panelled doors	Same as Type-II & III	25 to 30 mm thick WPC of density 650 kg per cum paneled / 30 to 35 mm thick flush doors.	Some as Type-V & VI	
	Other doors	35 mm thick, Chemically Treated Hard wood styles and rails with 12 mm thick commercial ply/ wood	Same as Type II & III	35 mm thick, Chemically Treated Hard wood styles & rails with paneling of 12 mm thick teak ply / teak wood / 5 mm thick	Same as Type-V & VI	

S.No	Description	Latest Applicable Specifications				Remarks
		Type-II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII /Bungalows	
		paneling or factory made flush door shutters both side commercial ply veneering and finished with wooden Putty and painted.		toughened glass glazing or 35 mm thick factory made exterior grade both side decorative veneered type flush door shutter with melamine polish.		
	c) Window shutters All windows shutters	Double shutter one glazed shutters with frames of / powder coated or colour anodized aluminum extruded tubular sections/ uPVC extruded profiles of minimum wall thickness of 2 mm/ 30 mm thick Chemically Treated Hard wood with glazing of float / toughened glass and with / without reflective coating / high performance coatings or double glazed unit as per design & requirement and other shutter with stainless steel SS-304 grade wire-mesh in place of glazing.	Same as Type II & III	Double shutter one glazed shutters with frames of / powder coated or colour anodized aluminum extruded tubular sections/ uPVC extruded profiles of minimum wall thickness of 2 mm/ 30 mm thick 2 nd class teak wood with glazing of float / toughened glass and with / without reflective coating / high performance coatings or double glazed unit as per design & requirement and other with stainless steel SS-304 grade wire-mesh in place of glazing.	Same as Type-V & VI	
	Domestic help's area (doors & windows)	Not admissible to Type-II and III	For domestic help's quarters same as Type II to III	For domestic help's quarters same as Type II to III	For domestic help's quarters same as Type II to III	Shutters in all respective rooms shall be as per the finishes of Type-1 to III in those rooms
	d)Hardware &Fittings Main units	Powder coated or colour anodized aluminum stainless steel fittings SS-304 grade.	Same as Type II & III	Same as Type-II & III	Stainless steel fittings SS-304 grade or chromium / nickel/ chromium & nickel plated brass fittings.	Rubberized door flashing at the bottom rails of all external doors shall be provided for protection from insects and rainwater etc.
FLOORING, SKIRTING & DADO						
	a)Flooring Living/drawing room, dining & family lounge	Vitrified / ceramic tile flooring of size not less than 400 x 400 mm	Vitrified tile flooring of size not less than 600 x 600 mm	18 mm thick pre-polished granite stone of approved shade/ vitrified tile (in all designs and shades) flooring of size not less than 600 x 600 mm; living / drawing room can also have scratch resistant engineered wood or laminated wooden flooring.	Same as Type V & VI	

S.No	Description	Latest Applicable Specifications				Remarks
		Type-II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII /Bungalows	
	Office area	Not admissible	Not admissible	Not admissible	Scratch resistant engineered wood or laminated wooden flooring	
	Bedrooms	Scratch resistant ceramic tiles / vitrified tiles of size not less than 400 x 400 mm with joints finished with matching grout.	Scratch resistant ceramic / verified tiles of size not less than 600 x 600 mm with joints finished with matching grout.	Vitrified tiles in all designs and shades (with water absorption less than 0.08%) of size not less than 600 x 600 mm/ scratch resistant ceramic tiles with joints finished with matching grout, engineered wood or laminated wooden flooring in one bedroom.	Same as Type-V & VI	
	Kitchen	Anti-skid vitrified tiles of size not less than 300 x 300 mm with water absorption less than 0.08% laid with joints finished with matching grout	Same as Type-II & III	Anti-skid vitrified tiles of size not less than 400 x 400 mm with water absorption less than 0.08% with joints finished with matching grout.	Anti-skid vitrified tiles of size not less than 600 x 600 mm with water absorption less than 0.08% with joints finished with matching grout.	
	Kitchen counter	18mm thick pre-polished granite with nosing as per design				
	Common circulation area	18 mm thick pre-polished granite / vitrified tiles in all designs and shades (with water absorption less than 0.08%) of size not less than 600 x 600 mm.				
	Domestic help’s area (flooring)	Not admissible to Type-II and III	For domestic help’s quarters flooring shall be as per flooring of Type II & III			Finishes in all rooms shall be as per the finishes of Type-1 to III in respective rooms
	Common circulation area in domestic help’s quarters	Not admissible to Type-II and III	18 mm thick granite stone / locally available stone			Use of locally available stone shall be as per approval of higher of Senior Architect / Chief Architect provided in the Region.
	Main Staircase	18 mm thick honed / flamed finish granite in single length of treads & risers				Nosing design in treads shall be as per architectural design
	Fire escape staircase					
	Toilets / bathroom/ WC	Glazed ceramic anti-skid of size not less than 300 x 300 mm. including grouting the joints.	Same as Type-II & III	Rectified ceramic anti-skid tiles of size not less than 300 x 300 mm	Anti-skid vitrified/ ceramic tiles (with water absorption less than 0.08% not less than 300 x 300 mm or 18 mm thick gang-saw cut pre-polished granite stone.	
	Skirting in rooms and other areas	100 to 150 mm high skirting matching the floor material.				

S.No	Description	Latest Applicable Specifications				Remarks
		Type-II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII /Bungalows	
	Kitchen dado	Ceramic glazed / vitrified tiles of size not less than 200 x 300 mm as per design from floor upto full height.	Same as Type-II & III	Ceramic glazed / vitrified tiles of size not less than 300 x 450 mm as per design from floor to full height	Ceramic glazed / vitrified tiles of size not less than 300 x 450 mm as per design from floor to full ht.	Must be read with scale of amenities in the respective categories
	Toilets/ bathrooms / WC dado	Ceramic glazed / vitrified tiles of size not less than 200 x 300 mm upto full height with decorative bands at certain intervals.	Same as Type-II & III	Ceramic glazed / vitrified tiles of size not less than 300 x 450 mm upto full height with decorative bands at certain intervals	Ceramic glazed / vitrified tiles of size not less than 300 x 450 mm upto full height with decorative bands at certain intervals.	
5.	RAILINGS / PARAPETS IN BALCONIES / TERRACE					
	(a) Railings in balconies	Clear 1.00 m high MS railing made out of MS flats and square bars with 40 mm dia MS pipe hand rail on top (as per approved design)	Clear 1.00 m high stainless steel railing made out of tubular balustrades with horizontal tubular SS tubes as rails and hand rail on top (as per approved design); all stainless steel tubular members to be on SS-316 L grade.			
	Note: Hand rail of the balcony railings in multi storey flats may be so designed that clothes drying lines in sufficient numbers are provided along with					
	(b) Parapet on terrace	200 / 230 mm thick masonry in autoclaved aerated cement concrete (ACC) blocks / RCC / burnt clay FPS bricks duly plastered on both sides and top upto 1.0 meter clear height				
6.	FINISHES					
	(a) Internal finishes	All walls & ceiling to be treated with 2 mm thick POP (one time only) and painted with low VOC acrylic washable distemper. Synthetic enamel paint on all wood works and steel works	All walls & ceiling to be treated with 2 mm thick POP (one time only) & painted with low VOC acrylic washable distemper. Synthetic enamel paint on all wood works & steel works	All walls & ceiling to be treated with 6 mm thick POP punning (one time only) and painted with low VOC plastic emulsion paint. Synthetic enamel paint on all wood works and steel works	Premium acrylic emulsion paint with low VOC of approved shade in roller finish over 6 mm thick POP wall punning Synthetic enamel paint on all wood works and steel works	
	(b) External finishes	Quartz reinforced texture acrylic paint finish/Premium acrylic smooth water proof exterior finish over cement-based putty / washed mosaic plaster in premium cement. Synthetic enamel paint on all wood work & steel work	Same as Type-II & III.	Quartz reinforced texture acrylic paint finish of approved shade /premium acrylic smooth water proof exterior finish / washed mosaic plaster in premium cement-based putty /exposed brick / stone work/GRC / designer cement concrete tile cladding/ACP cladding in combination with structural glazing	Same as Type-V & VI	In case of large campus etc., the external finishes of the residences shall match the overall colour & texture finishes within the campus

Note: For hostels, same specifications as for Type-IV & Type-IV (Special) quarters shall be followed.

ANNEXURE-I (b)

SCALE OF AMENITIES (CIVIL) FOR GENERAL POOL RESIDENTIAL ACCOMODATION (GPRA)

Item No.	Item	Type-II & III	Type-IV & IV (Special)	Type-V & VI	Type-VII & VIII	Domestic help's Qtrs.
1	Kitchen cabinets					
i)	Cooking platform	Yes	Yes			Yes
ii)	Stainless steel AISI 304(18/8) kitchen sink as per IS 13983 with drain board	Yes	Yes			Yes
iii)	Built in cupboard made up of box and shelves with both side balancing laminated and shutters with one side decorative and other side balancing laminated 18 mm thick high moisture resistant HDF board or Same shelves with box and shutter of 18 mm thick EPC boards, with stainless steel hardware, as per architectural design and specifications.	Yes, (with shelves)	Yes, (drawers with telescopic channels)			
iv)	25 mm thick and not more than 400 mm wide both side balancing laminated high moisture resistant HDF board shelves, in tiers upto 2100 mm height in niche and covered with 18 mm thick one side decorative and other side balancing laminated high density high moisture resistant HDF board, with stainless steel hardware as per architectural design and specifications.	Yes	Yes			Yes
v)	Factory made modular kitchen having sink with double bowl & double drain-board, cooking platform and electric chimney of reputed company.			Yes	Yes	
2	Wardrobes					
	Built in cupboard of minimum depth 650 mm made up of 18 mm thick one side decorative and other side balancing laminated high moisture resistant HDF board in box, sides, top and bottom and 18 mm thick both side balancing laminated high moisture resistant HDF board in shelves, with stainless steel hardware as per architectural design and specifications.	One in each bed room upto ceiling height	One in each bed room upto ceiling height (steel shutters with frame not to be used)			One upto ceiling height
	Factory made wardrobe carcass, shelves, drawers etc. manufactured in 19 mm thick block board / ply wood painted with synthetic enamel paint or primer on all the inner surfaces, and sides top and shutter faces finished with post formed lamination / natural veneer with melamine polish and using stainless steel hardware as per the approved sample.			One in each bed room upto ceiling height	One in each bed room upto ceiling height	
3	Magic eye in front entry door.	One	One	One	One	One
4	Curtain rod with required accessories.	On all windows and doors in all rooms except kitchen, toilets/baths/WC's	Drapery rods on all windows and doors in all rooms except kitchen, toilets/baths/WC's	Same as Type IV & IV (Special)	Same as Type IV & IV (Special)	Same as Type -II & III
5	Set of pegs.	In all toilets / baths /WC's	In all toilets/baths/WC's and wardrobes	In all toilets/baths/WC's and wardrobes	In all toilets/baths/WC's & wardrobes	
6	18 mm thick projected window sill lining, window jambs.	Granite stone	Granite stone	Granite stone	Granite stone	Granite stone

**SCALE OF AMENITIES FOR SANITARY AND WATER SUPPLY FITTING FOR GENERAL POOL RESIDENTIAL
ACCOMMODATION (GPRA)**

S.No.	Item	Type-II&III	Type-IV& IV (Special)	Type-V &VI	Type-VII & VIII	Domestic help's Qtrs.
1	EWC / IWC with trap (EWC with seat rim and cover) and low level dual flushing cistern.	One in each toilet				
2	Water jet and / or health faucet with WC.	Water jet and Health faucet with each EWC				Not applicable
3	Wash basin with CP brass basinmixture for hot & cold water, single lever quarter turns type with ceramic cartridges.	One in each toilet & one in dining area as per design.				One in each toilet
4	Tap (In kitchen, toilet, bath & WC) CP brass bib cock provided quarter turn type with ceramic cartridges.	Three in kitchen, one in each toilet for WC.				
5	Shower with CP brass diverter /mixture single liver type for hot & cold water with ceramic cartridges	One in each toilet/bath				-
6	CP brass towel rail and towel ring	One towel ring with each wash basin and towel rail in each bath				
7	Mirror with frame and glass shelf having stainless steel frame/guard bar/brackets.	600 x 450 mm with each wash basin		As per design with each wash basin		600 x 450 mm with each wash basin
8	CP brass/ceramic toilet paper holder.	With each EWC				
9	Soap rack / niche as per architectural design and specification.	One with each wash basin and in each bath				
10	Plumbing for water purifier and geyser.	Yes for both in kitchen and for geyser in each bath				
11	Storage tank of capacity as per NBC 2016 provision of separate tank for WC & drinking water.	Separate tanks for kitchen and toilets for dual flushing system as per requirements with provision of online filter.				
13	Water meter of appropriate bore size, as per approval of the local municipal body.	Yes, inside the flat at direct supply point to dwelling unit or at first inlet point if supply is through bulk storage at terrace; separately for each piping system.				

ANNEXURE-I (d)

SCALE OF AMENITIES FOR ELECTRICAL INSTALLATION IN GENERAL POOL RESIDENTIAL ACCOMMODATION

S.No.	Description	Type-II	Type-III	Type-IV & IV (Special)	Type-V	Type-VI	Type-VII& VIII	Domestic help's Qtrs.
1	Power plug points (16 A 6 pins)	2 in each room 1 in kitchen 1 in utility area	2 in each room 1 in kitchen 1 in utility area	2 in each room 1 in kitchen 1 in utility area	3 in drawing room 3 in Dining Room 2 in each Bedroom 2 in Kitchen 1 in Utility Area	3 in drawing room 3 in dining room 2 in each bedroom 2 in kitchen 1 in utility area	2 in office 4 in drawing room 3 in dining room 2 in family lounge 2 in each bedroom 2 in kitchen 1 in utility area	Total 2
		Total 8	Total 8	Total 12	Total 15	Total 17	Total 22	
2	Light plug points (6 A)	2 in each room 1 in kitchen 1 in balcony area	2 in each room 1 in kitchen 1 in balcony area	2 in each room 1 in kitchen 1 in balcony area	2 in each room 1 in kitchen 1 in store 1 in main balcony	2 in each room 1 in kitchen 1 in store 1 in each balcony	1 in office 2 in each room 1 in kitchen 1 in store 1 in each balcony	Total 2
		Total 8	Total 8	Total 12	Total 13	Total 15	Total 20	
3	Bracket lights (with normal fittings excluding lamp/bulb)	1 in each room 1 in kitchen 1 in each toilet 1 in utility	1 in each room 1 in kitchen 1 in each toilet 1 in utility	1 in each room 1 in kitchen 1 in each toilet 1 in utility	1 in store 1 in each toilet 1 in utility	1 in store 1 in each toilet 1 in utility	1 in store 1 in each toilet 1 in utility	Total 3
		Total 4	Total 4	Total 11	Total 10	Total 12	Total 12	
4	Ceiling fans	1 in living room 1 in each bedroom	2 in living room 1 in each bedroom	2 in living room 1 in dining room 1 in each bedroom	2 in drawing room 1 in dining room 1 in each bedroom 1 in each balcony	2 in drawing room 1 in dining room 1 in family lounge 1 in each bedroom 1 in each balcony	2 in drawing room 1 in dining room 1 in family lounge 1 in each bedroom 1 in each balcony	Total 1
		Total 3	Total 4	Total 6	Total 6	Total 12	Total 14	
5	Call bell points	1	1	2	3	3 (One with image display system)	4 (One with image display system)	
6	Exhaust fans	1 each in kitchen, bath & WC	1 each in kitchen, bath & WC	1 each in kitchen, bath & WC	1 each in kitchen & toilets	1 each in kitchen & toilets	1 each in kitchen & toilets	Total 2
7	AC points (with MCB connected socket outlet with wiring)	1 in each room except kitchen & toilet	1 in each room except kitchen & toilets	1 in each room except kitchen & toilets	1 in each room except kitchen & toilets	1 in each room except kitchen & toilets	1 in each room except kitchen & toilets	
8	Geyser point (with MCB connected socket outlet with wiring)	1 in bathroom	1 in bathroom / toilet	1 in kitchen 1 in each toilet	1 in kitchen 1 in each toilet	1 in kitchen 1 in each toilet	1 in kitchen 1 in each toilet	1 in toilet
9.	EDB/MCB point (single phase)	1	1					1
10.	EDB/MCB (3 phase)			1	1	1	1	
11	Cable TV point	1 in living room 1 in each bedroom	1 in living room 1 in each bedroom	1 in drawing room 1 in each bedroom	1 in drawing room 1 in each bedroom	1 in drawing room 1 in dining room 1 in each bedroom	1 in office 1 in drawing room 1 in dining room 1 in family lounge 1 in each bedroom	1

S.No.	Description	Type-II	Type-III	Type-IV & IV (Special)	Type-V	Type-VI	Type-VII& VIII	Domestic help's Qtrs.
12	Telephone point As per the approval of competent authority	1 in living room 1 in each bedroom	1 in living room 1 in each bedroom	1 in drawing room 1 in each bedroom	1 in drawing room 1 in each bedroom	1 in drawing room 1 in dining room 1 in each bedroom	1 in office 1 in drawing room 1 in dining room 1 in family lounge 1 in each bedroom	1
13	Decorative light fittings				3 in drawing room 3 in dining room	3 in drawing room 3 in dining room 2 in each bedroom	3 in office 3 in drawing room 3 in dining room	
	for LED bulbs (without bulbs)				2 in each bedroom 1 in kitchen	2 in kitchen	3 in family lounge 2 in each bedroom 2 in kitchen	
					Total 13	Total 16	Total 22	
14	LED tube light fittings (excluding tubes)	1 in each room 1 in kitchen	1 in each room 1 in kitchen	1 in each room 1 in kitchen	1 in drawing room 1 in dining room 1 in each bedroom 1 in kitchen	1 in drawing room 1 in dining room 1 in each bedroom 1 in kitchen	1 in office 1 in drawing room 1 in dining room 1 in family lounge 1 in each bedroom	
		Total 4	Total 4	Total 6	Total 6	Total 7	Total 9	
15	Modular switches	---	---	---	Yes	Yes	Yes	---

Note: All the common areas e.g. lifts & staircases, lobbies, connecting corridors etc. shall have lighting arrangement along with LED light fixtures as per actual design.

ANNEXURE-I (e)

GENERAL SPECIFICATIONS FOR NON – RESIDENTIAL BUILDINGS

Item No.	Description	Specifications
1.0	FOUNDATION	
1.1	For RCC framed structure	As per structural design based on soil investigation. (Primarily with RCC footings, columns, raft etc.).
1.2	For composite (partially load bearing and partially RCC framed structure)	As per structural design based on soil investigation. (brick/stone work spread footings on cement concrete base upto 1500 mm depth below ground level with or without RCC isolated combined footings with plinth beams/bands).
2.0	SUPER STRUCTURE	
2.1	For RCC framed structure	R.C.C. framed construction having filler walls with fly ash bricks / burnt clay FPS bricks / aerated cement concrete (ACC) blocks / autoclaved aerated cement (AAC) blocks.
2.2	For composite (partially load bearing and partially RCC framed structure)	Load bearing construction in burnt clay FPS bricks masonry / stone masonry / aerated cement concrete (ACC) blocks / fly ash bricks / autoclaved aerated cement (AAC) blocks with intermediate columns and RCC bands at lintel/ceiling level as per design.
2.3	Internal partitions:- Office /college/hospital	Aerated cement concrete (ACC) blocks./ Light weight autoclaved aerated concrete (AAC) blocks/ Gypsum blocks/ Non asbestos double skin cement boards/ Fly ash bricks/
	Schools	Light weight autoclaved aerated concrete (AAC) blocks / burnt clay FPS brick masonry work / aerated cement concrete (ACC) blocks / fly ash bricks.
2.4	Sunken Floor in Lavatory Blocks for Floor Traps / W.C. with four course waterproofing treatment	Sunk recess in RCC floor of required size and depth may be provided for floor traps, W.C. traps.
3.0	DOORS & WINDOWS	
3.1	Frames	
3.1.1	Door frames:- Office/college/hospital	Door frames of 2 nd class Indian teakwood or equivalent in officer's room. anodized / powder coated/ polyester powder coated aluminum extruded tubular sections/extruded hollow mild steel pipes (minimum 2 mm thickness)/uPVC extruded frame sections / WPC of density between 750 to 1000 kg per cum.
	Schools	Locally available chemically treated hard wood/ seamless mild steel tubular frame (with Hot Dip GI coating) of minimum 2 mm thickness.
3.1.2	Window frame:- Office/college/hospital	uPVC extruded sections of window frame / Aluminum extruded tubular sections / WPC of density between 750 to 1000 kg per cum.
	Schools	uPVC extruded sections of window frame / standard mild steel Z-section steel frame members.
3.2	Door & window shutters	
3.2.1	Door Shutter:- Office/college/hospital	Paneled type in 2 nd class Teak wood or flush door with teak veneered ply/ commercial ply or anodized/powder coated/ polyester powder coated aluminum shutters with toughened glass glazing/paneling wherever required as per CPWD specifications/as per design & drawing.
	Schools	Flush door shutters with Teak ply veneering/commercial ply veneering (including necessary lipping).
3.2.3	Frame and shutters in wet area	PVC/FRP/WPC door frames & shutters in wet areas.
3.3	Window shutters:- Office/college/hospital	Factory made colour anodized/ powder coated/ polyester powder coated Z-section aluminum shutters/ standard uPVC/WPC section for windows glazed with glazing of float / toughened glass and with / without reflective coating / high performance coatings or double glazed unit as per design & requirement.
	Schools	Standard powder coated aluminum tubular profiles windows / mild steel Z-section steel window with glazing of float / toughened glass and with / without reflective coating / high performance coatings or double glazed unit as per design & requirement.
3.4	Fittings	Anodized aluminum / stainless steel SS-304 grade.
3.5	Fire check door	As per fire safety specifications.
4.0	FLOORING	
4.1	Main entrance hall:- Office/college/hospital	18mm thick Pre polished granite flooring.
	Schools	18mm thick Pre polished granite flooring in entrance lobby.
4.2	Corridors:- Office/college/hospital	Matt finished vitrified tiles/granite flooring
	Schools	Kota stone flooring and corresponding skirting.

Item No.	Description	Specifications
4.3	Rooms:- Office/college/hospital	Granite tiles/vitrified tiles/engineered wood flooring (in officers chambers)
	Schools	Kota stone flooring and corresponding skirting. In principal room and office area vitrified tiles of size 600 x 600 mm and matching skirting/dado.
4.4	Lavatory Blocks:- Office/college/hospital	18 mm thick Granite flooring.
	Schools	Rectified antiskid tiles (of size not less than 400 x 400 mm).
4.5	Laboratories in schools	Rectified antiskid tiles (of size not less than 400 x 400 mm) and chemical resistance tiles in floor/counters/shelves of chemistry labs.
4.6	Flooring in basement	Vacuum dewatered concrete.
4.7	Rest of the area	Vitrified ceramic floor tiles
5.0	STAIRCASE	
5.1	Internal staircases:- Office/college/hospital	18 mm thick single piece granite stone in flooring in treads & risers with dado of matching permanent finish specifications.
	Schools	20 mm thick single piece kota stone flooring in treads & risers with 1200 mm high dado of ceramic glazed tiles of size 300 x 450 mm.
5.2	Fire escape staircase	18 mm thick flamed granite in single piece in treads & risers with dado of matching permanent finish specifications.
6.0	RAILING:- Office/college/hospital	Stainless steel balustrades with 12mm thick toughened glass railing or stainless steel tubular horizontal guard rails /hand rails in SS-304 grade.
	Schools	1200 mm high parapets minimum 100 mm thick or mild steel railing with GI pipe hand rail.
7.0	TOILETS:- Office/college/hospital	Granite flooring / glazed tiles of size not less than 300 x 450 mm / 400 x 600 mm in dado upto ceiling height, granite counters, rimless counter sunk basins/stainless steel sinks, mirrors with moulded PVC frame, FRP/PVC doors with frames.
	Schools	Rectified anti skid tiles of size not less than 400 x 400 mm and dado upto door height with ceramic glazed wall tiles of size not less 300 x 450 mm.
8.0	ROOFING	
8.1	Roof treatment	Coba treatment/over deck insulation with puff slab.
8.2	False ceiling:- Office/college/hospital	False ceiling in office area & toilets to cover the services as per design requirements.
	Schools	False ceiling in office area, principal room and in toilets (If needed to hide sanitary pipes)
9.	FINISHING	
9.1	External:- Office/college/hospital	Dry stone cladding/washed stone grit plaster/water proof weather coat paints/ structural glazing/ ACP cladding conforming to Energy Conservation Building Code.
	Schools	Dry stone cladding/washed stone grit plaster upto certain specified heights rest cement plastered surface with white cement based putty and acrylic smooth exterior paints.
9.2	Internal:- Office / college / hospital	Cement plaster in wet areas / Dry acrylic paint / distemper in service area & basement / Acrylic emulsion paint/ textured paint (low V.O.C) over POP / Wall paneling as per approved architectural design upto sill level / 1200 mm height or ceiling height
	Schools	Cement plastered wall surfaces with POP (one time) and acrylic smooth interior paints in classrooms, corridors and labs etc. In principal room and office texture paint over POP surface.
9.3	Painting:- Office/College/Hospital	Doors & windows – painting/polishing on wood work as per design requirement.
	Schools	Doors and windows to be painted with synthetic enamel paint and in corridors upto 1500 mm height on the exterior of classroom walls and upto parapet height on the other side to be painted with synthetic enamel paint.
10.0	Provision for barrier free building	Ramps, toilets for physically challenged, chequered tiles, use of Braille signage & lifts etc. GRC (glass reinforced concrete) tiles in ramp area.

GUIDELINES FOR WORKING OUT PLINTH AREA

(As per IS:3861-2002 with upto date amendments as may be issued from time to time)

In order to ensure the adoption of a uniform method of working out Plinth Area from plans, the following guidelines are laid down. These guidelines are general in nature. These are based on the fundamental principle that the plinth area of a building should present a true picture of the covered floor area provided in the plans.

1. Terminology

1.1 Plinth Area :

The plinth area shall mean the built-up covered measured at the floor level of basement or of any storey.

1.2 Balcony :

A horizontal projection with a hand-rail, balustrade or a parapet.

1.3 Mezzanine Floor:

An intermediate floor in between two main floor having minimum height of 2.2 m from the floor and having a proper and permanent access to it.

Note: Where rules of the local bodies permit intermediate floor of minimum 1.8 m clear height, may also be considered as mezzanine floor for the purpose of measurement.

1.4 Mumty (Stair Cover) :

It is a structure with a roof over a staircase and its landing, built to enclose only the stairs for the purpose of providing protection from weather and not used of human habitation .

1.5 Loft

A structure providing, intermediate storage space in between two main floors without having a permanent access and at a height not less than 2.0 m from the floor below.

1.6 Porch

It is a covered structure supported on pillars or otherwise for the purpose of pedestrian or vehicular approach to a building.

2. General

2.1 Linear measurement shall be measured to nearest 0.01 m, and areas shall be worked out to the nearest 0.01m²

2.2 The areas of each of the following categories shall be measured separately and shall not be clubbed together so as to enable the cost computation at different rates per unit area as worked out for varied heights or categories.

- a) Basement
- b) Floor without cladding (stilted floor)
- c) Floors including top floor which may be partly covered;
- d) Mezzanine floor including additional floor for seating in assembly building/theatre, auditorium etc
- e) Garage
- f) Accommodation for service staff
- g) Mumty (Stair cover)
- h) Machine room
- i) Porch
- j) Towers, turrets, domes projecting above the terrace level at terrace.

3. Method of measurement of Plinth Area

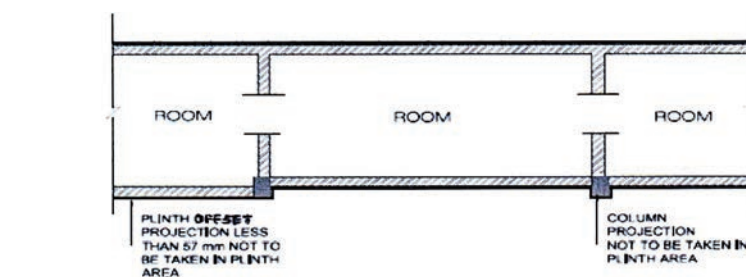
The total Plinth area shall be the sum total of built up covered areas measured at each floor level of the buildings for the categories mentioned under 3.1 below and exclude the areas given in 3.2

3.1 For the purpose of plinth area, following shall be included:

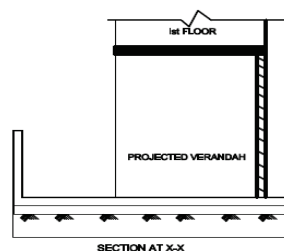
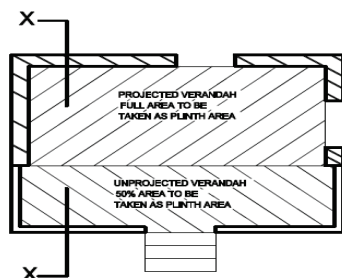
- a) Area of the wall at the floor level excluding plinth offsets, if any; when the building consists of columns projecting beyond cladding, the plinth area shall be taken upto the external face of cladding (in case of corrugated sheet cladding outer edge of corrugation shall be considered) (Refer sketch-1)
 Note: In case, a common wall is owned jointly by two owners, only half the area of such walls shall be included in the plinth area of one owner.
- b) Shafts for sanitary, water supply installations, garbage chute, telecommunication, electrical, fire fighting, air-conditioning and lifts.
- c) Stair case: Main stair case, open spiral/service stair case/fire escape stair case etc.
 (i) 100 percent of the plan area of main / service / fire escape stair (enclosed in defined stair hall and mummy at top)
 (ii) 50 percent of the plan areas of service /fire escape/ openstairs (without any enclosure around and mummy at top).
 Note:- Any type of steps, ladder/cat-ladder, spiral/flat, with or without side guard rails created for the purpose of approaching inaccessible terrace or from terrace to top of bulk water storage tanks or otherwise for maintenance purposes shall not account for plinth area.
- d) In case of open verandah with parapets (Refer sketch-2):
 (i) 100 percent areas for the portion protected by the projections above, and
 (ii) 50 percent area for the portion unprotected from above.
- e) In case of balcony projections with railing / parapets (Refer sketch-3):
 (i) 100 percent area of the balcony covered by projection above
 (ii) 50 percent area of the uncovered balcony
- f) In case of alcove made by cantilevering a slab beyond external wall:
 (i) 25 percent of the area for the alcove of height upto 1 m.
 (ii) 50 percent of the area for the alcove of height more than 1 m and upto 2 m, and
 (iii) 100 percent of the area for the alcove of height more than 2 m.
- g) Area of mummy and machine rooms (Refer sketch-4)
- h) Mezzanine floors shall be measured as different floor levels with deduction for lesser floor heights than the standard heights

3.2 The following shall not be included in the plinth area

- a) Area of loft
- b) Area of architectural band, cornice, etc.
- c) Area of vertical sun breaker or box louver projecting out and other architectural features, for example slab projection for flower pot, etc. (Refer sketch-5)
- d) Terrace
- e) Open platform on ground
- f) Towers, turrets, domes projecting above terrace level.



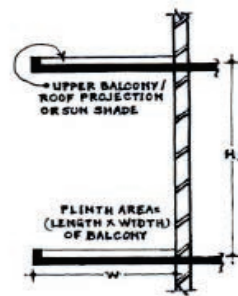
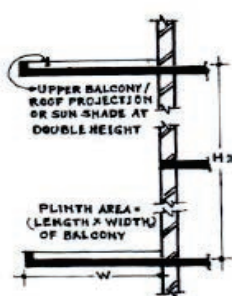
Sketch -1



Sketch -2



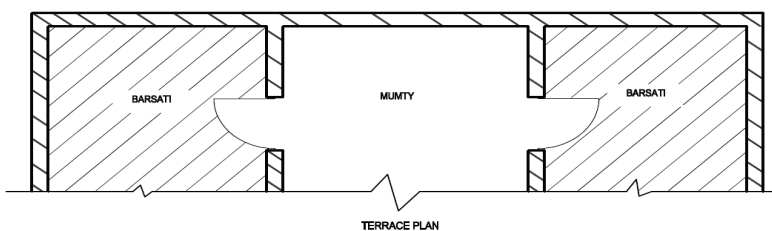
Uncovered balcony



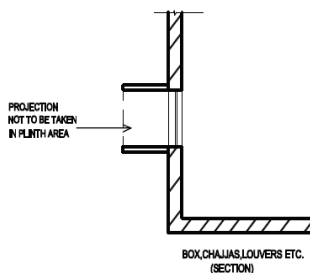
Covered balcony

H-1 refers to floor height & H-2 refers to double the floor height in case of staggered balconies.

Sketch -3



Sketch -4



Sketch- 5

Proforma for Plinth Area calculation (Floor wise) by Architectural unit

Name of Project:

Reference to building/location:

Floor :

S.No.	Room Designation	Area of Room			Area deductions			Net Area (in sqm) A-A ₁
		Length, L (in meter)	Breadth, B (in meter)	Area, A =L*B (in sqm)	Length, L ₁ (in meter)	Breadth, B ₁ (in meter)	Area, A ₁ = L ₁ *B ₁ (in sqm)	
1	Area of the wall at the floor level excluding plinth offsets							
(i)	Basement							
(ii)	Stilted floor							
(iii)	Entrance foyer / Lobby							
(iv)	Room-1/Hall-1							
(v)	Room-2/Hall-2							
(vi)	Room-3							
(vii)								
(viii)								
(ix)	Domestic help's room							
(x)	Corridors							
(xi)	Kitchen							
(xii)	Toilet							
(xiii)	Stores							
2	Shafts							
(i)	Sanitary and water supply							
(ii)	Garbage chute							
(iii)	Telecommunication							
(iv)	Electrical							
(v)	Fire Fighting							
3	Stairs							
(i)	Main/Service stairs (enclosed)							
(ii)	Service/Fire escape / Open							
4	Verandha							
(i)	Protected verandha							
(ii)	Un protected verandha							
5	Balconies							
(i)	Covered balconies							
(ii)	Uncovered balconies							
6.	Alcove (Cup-boards / Box storage)							
(i)	Upto 1.00 m							
(ii)	1.00 m to 2.00 m							
(iii)	Above 2.00 m							
7	Covered area at Terrace							
(i)	Machine Room							
(ii)	Mumty							
8	Mezzanine floor							
9	Poarch							

Note:- In above statement more no. of rooms/designated spaces may be added in serial and more than one toilets, balconies, corridors and other ancillary spaces may be incorporated accordingly. All care should be taken that no space on any floor is left out for calculation of plinth area. The proforma is for cuboidal plans only, architectural unit may modify it for other shapes in such a manner that calculation of plinth area is comprehensible.

Architect

Sr. Architect / Chief Architect

ANNEXURE-III (b)

Abstract of Plinth Area building wise

Name of Project:

Reference to building/location:

S. No.	Floor Designation	Floor No.	Plinth Area with;					
			Standard floor height		More than standard floor height		Less than standard floor height	
			Height (in m)	Area (in sqm)	Height (in m)	Area (in sqm)	Height (in m)	Area (in sqm)
1	Basement	(-x)						
2	(i) Ground Floor	0						
	(ii) Stilted floor	0						
	(iii) Porch (at ground floor)							
3	First floor	1						
4	Second floor	2						
5	Typical floor	3						
6								
7								
8								
9	Terrace floor							
	(i) Mumty							
	(ii) Machine rooms							
10	Mezzanine floor (at any floor)							
11	Domestic help's / service staff accommodation (at any floor)							
	Total Plinth Area (in building)							

Architect

Sr. Architect / Chief Architect

Abstract of Plinth Area of the project

Name of Project:

Reference to building/location:

S.No.	Building Designation (Name/block of building)	No. of blocks	Plinth Area (each block)	Total plinth area in sqm (as per building area details)	Reference to building abstract sheet
1	Residential				
	(i) Type- II				
	(ii) Type- III				
	(iii) Type- IV				
	(iv) Type- V				
	(v) Type- VI				
	(vi) Hostel- 1				
	(vii) Hostel- 2				
2	Office/Admn. Blocks				
	(i) Block- 1				
	(ii) Block- 2				
	(iii) Block- 3				
3	Class room/ Lecture hall Blocks				
	(i) Halls				
	(ii) Blocks				
4	Auditorium/ assembly hall/ workshops				

Architect

Sr. Architect / Chief Architect

S. No. 3.1(a to h) refers to areas to be included for plinth area, 3.2 (a to f) refers to areas not to be included and 2.2 (a to j) refers to areas to be calculated separately on Annexure-II. Plinth area calculation sheets as per proforma (Annexure-III (a), (b) & (c)) above, shall be provided by the Architectural unit.

The concerned Architectural unit would provide building wise Plinth area calculation abstract and a consolidated plinth area abstract for the entire campus based on the parameters explained in Annexure-II, duly approved and signed by stated Architects with the conceptual drawings so as to enable the Project Managers work out Preliminary Estimate based on these Plinth Area Rates.

PROFORMA FOR CALCULATION OF BUILDING COST INDEX

S.No	Description	Unit	%age	Rates as on 01.04.2021 (in ₹)	Proportionate value (in ₹)	Weightage rates (in ₹)	Weightage of Component	Rates at the time of revision of Cost Index	Cost Index
1	Bricks (Fly Ash)	1000 nos.	100%	4500.00	4500	4500.00	8.00	-	-
2	Cement (OPC)	qtl.	100%	500.00	500.00	500.00	14.50	-	-
3	TMT Steel Reinforcement bar								
a.	8 & 10 mm dia	qtl.	50%	4900.00	2450.00	4900.00	19.50	-	-
b.	12 & 16 mm dia		50%	4900.00	2450.00			-	-
4	Aggregates 20 mm a) Natural sources	cum	75%	1400.00	1050.00	1289.25	6.50	-	-
	b) Aggregates 20 mm (RCA)		25%	957.00	239.25			-	-
5 (a)	Sand (coarse sand) Natural sources	cum	75%	1500.00	1125.00	1310.25	3.00	-	-
(b)	Sand (coarse sand) RA		25%	741.00	185.25			-	-
6	Flooring Items								
a.	Vitrified tiles	sqm	50%	560.00	280.00	732.00	5.00	-	-
b.	Ceramic tiles		20%	300.00	60.00			-	-
c.	Kota stone		10%	320.00	32.00			-	-
d.	Granite stone		20%	1800.00	360.00			-	-
7	Paints								
a.	Synthetic enamel paint	litre	33.33%	175.00	58.33	138.32	3.00	-	-
b.	Acrylic washable distemper		33.33%	40.00	13.33			-	-
c.	Premium acrylic paint		33.33%	200.00	66.66			-	-
8	Door / windows-wooden / uPVC / aluminum / steel								
a.	35 mm thick flush door shutters both side commercial veneering	sqm	30.00%	1000.00	300.00	2085.00	7.00	-	-
b.	Factory made, standard Z- section steel windows		15.00%	1750.00	262.50				
c.	uPVC windows		20.00%	3500.00	700			-	-
d.	Aluminum window		35.00%	2350.00	822.50			-	-
9	Pipes								
a.	15 mm GI pipes	metre	10.00%	95.00	9.50	307.50	2.50		
b.	100 mm CI pipes		40.00%	650.00	260.00				
c.	20 mm clack conduits		20.00%	70.00	14.00				
d.	20 mm CPVC pipes		30.00%	80.00	24.00				

S.No	Description	Unit	%age	Rates as on 01.04.2021 (in ₹)	Proportionate value (in ₹)	Weightage rates (in ₹)	Weightage of Component	Rates at the time of revision of Cost Index	Cost Index
10	Lamps & Fans								
a.	Ceiling fans 1200 mm(Five Star)	each	50%	1590.00	795.00	1060.00	4.50		
b.	1200 mm LED tube lights with fittings		40%	640.00	256.00				
c.	LED bulbs9/11 W		10%	90.00	9.00				
11	Electrical machinery, Motor 7.5 HP (pump set) 1500 RPM	each	100%	23010.00	23010.00	23010.00	2.50		
12	Wires & cables								
a.	Copper wire 1.5 sqmm	100 metre	70%	1335.00	934.50	1888.50	4.00		
b.	Copper wire 4.0 sqmm		30%	3180.00	954.00				
13	Labour								
a.	Skilled	each	50%	784.00	392.00	714.50	20.00		
b.	Unskilled		50%	645.00	322.50				
Total							100.00		

Note:-

- In the above proforma at S. No. 4 & S. No. 5, Aggregates – 20 mm and Sand (coarse sand) are considered in two parts (a) & (b) respectively where (a) represents 75% from natural source and (b) represents 25% RCA/RA. In areas where components of RCA/RA are not available (because of non setting up of C&D waste conversion units), the components of aggregate 20 mm at 25% RCA and coarse sand at 25% RA can be avoided and 100% of these materials from natural sources only be considered.
- In the above proforma the rates for building materials adopted in column 5 and corresponding computed rates in column 6 & column 7 are bare rates excluding GST or any other levy. Therefore, for working out local cost index prevailing bare rates only at the respective station shall be considered.

ANNEXURE-V

STATEMENT OF COST INDICES OF DELHI/NCR SINCE 1955

Year	Effective Date	Cost Index	Base 100 of PAR		Year	Effective Date	Cost Index	Base 100 of PAR
1962	18.09.1962	131	1955		2006	01.04.2006	236	1992
1966	19.07.1966	148	1955		2007	01.04.2007	254	1992
1969	15.01.1969	157	1955		2007	01.10.2007	260	1992
1969	17.06.1969	168	1955		2007	01.10.2007	100	2007
1969	15.10.1969	181	1955		2008	01.04.2008	114	2007
1970	01.01.1970	100	1970		2008	01.10.2008	119	2007
1971	05.04.1971	120	1970		2009	01.04.2009	113	2007
1972	03.05.1972	134	1970		2009	01.10.2009	126	2007
1973	24.12.1973	166	1970		2010	01.04.2010	136	2007
1975	26.06.1975	180	1970		2010	01.10.2010	139	2007
1976	01.10.1976	180	1970		2011	01.04.2011	149	2007
1976	01.10.1976	100	1976		2011	01.10.2011	151	2007
1977	30.12.1977	113	1976		2012	01.04.2012	161	2007
1978	31.03.1978	116	1976		2012	01.10.2012	170	2007
1979	31.03.1979	130	1976		2012	01.10.2012	100	2012
1980	10.04.1980	176	1976		2013	01.04.2013	100	2012
1981	23.04.1981	200	1976		2014	01.04.2014	105	2012
1982	29.01.1982	217	1976		2014	01.10.2014	107	2012
1982	30.03.1982	221	1976		2015	01.04.2015	104	2012
1983	16.03.1983	245	1976		2015	01.10.2015	103	2012
1984	13.03.1984	274	1976		2016	01.04.2016	102	2012
1985	27.06.1985	312	1976		2016	01.10.2016	101	2012
1986	09.07.1986	340	1976		2017	01.04.2017	111	2012
1987	16.06.1987	370	1976		2017	01.10.2017	115	2012
1988	31.03.1988	397	1976		2018	01.04.2018	116	2012
1988	01.11.1988	421	1976		2018	01.10.2018	118	2012
1989	31.10.1989	494	1976		2019	01.04.2019	118	2012
1990	31.03.1990	521	1976		2019	01.04.2019	100	2019
1991	11.02.1991	564	1976		2019	01.10.2019	98	2019
1991	31.03.1991	595	1976		2020	01.04.2020	101	2019
1992	31.12.1991	664	1976		2020	01.04.2020	100	2020
1992	01.01.1992	100	1992		2020	01.10.2020	97	2020
1994	01.01.1994	117	1992		2021	01.04.2021	105	2020
1995	01.06.1995	132	1992		2021	01.04.2021	100	2021
1997	01.06.1997	145	1992		1. PAR 1955 base 100 is effective from 17.05.1955 2. PAR 1970 base 100 is effective from 01.01.1970. 3. PAR 1976 base 100 is effective from 01.10.1976. 4. PAR 1992 base 100 is effective from 01.01.1992. 5. PAR 2007 base 100 is effective from 01.10.2007. 6. PAR 2012 base 100 is effective from 01.10.2012. 7. PAR 2019 base 100 is effective from 01.04.2019. 8. PAR 2020 base 100 is effective from 01.04.2020. 9. PAR 2021 base 100 is effective from 01.04.2021			
1998	01.06.1998	148	1992					
1999	01.09.1999	158	1992					
2000	01.07.2000	162	1992					
2001	01.04.2001	166	1992					
2002	01.04.2002	176	1992					
2003	01.04.2003	197	1992					
2004	01.04.2004	209	1992					
2005	01.04.2005	223	1992					

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सत्यमेव जयते

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CENTRAL PUBLIC WORKS DEPARTMENT