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भारत सरकार

Government of India

कुर्सी क्षेत्र दरें

PLINTH AREA RATES

2020

CPWD

DIRECTOR GENERAL, CPWD, NIRMAN BHAWAN, NEW DELHI

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PLINTH AREA RATES 2020

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CPWD

VINIT KUMAR JAYASWAL
Director General

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Central Public Works Department
Nirman Bhawan, New Delhi

Foreword

The preliminary cost estimation is often the first step towards execution of a work. Therefore, it is very important that the design brief, preliminary drawings and specifications of work are finalized carefully, and that the preliminary cost is based on reliable unit rate. The plinth area rates being published by CPWD are derived from a large data base of various types of buildings completed in different parts of the country. These rates are used for preparation of preliminary cost estimates of works by not only CPWD engineers but also by construction professionals, architects and practicing engineers in construction industry and other government organizations.

Plinth Area Rates was last published in 2019 after taking into account the use of new materials, new construction technologies and revised General Pool Residential Accommodation (GPRA) norms approved by the Ministry of Housing and Urban Affairs.

This edition of Plinth Area Rates is based on latest unit rate of building and development works. The feedback and suggestions received from field units have also been incorporated.

I acknowledge the sincere work by Shri Anant Kumar, ADG (Tech), Shri M.K. Mallick, Chief Engineer (CSQ) (Civil), and the entire team of CSQ (Civil) in bringing out the Plinth Area Rates 2020 in a short time.

(Vinit Kumar Jayaswal)

CPWD

ANANT KUMAR
Additional Director General
(TECH.)

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Central Public Works Department
Nirman Bhawan, New Delhi

Preface

Plinth Area Rates published by Central Public Works Department is one of the most comprehensive and useful technical document being used by CPWD, PWDs, other government departments, public sector undertakings, builders, engineers and valuation officers for preparation of preliminary estimates for various categories of buildings viz. offices/colleges/schools/hospitals and hostels/residential buildings. This latest updated version of Plinth Area Rates 2020 is the 9th in the series of its publications since 1955 in the post independent India era.

Plinth Area Rates 2019 was released after a gap of 7 years. Most of the present day construction requirements of new technologies and revised General Pool Residential Accommodation (GPRA) norms of MoHUA (notified vide office memorandum no. DG/Arch./6 dated 07.08.2013) were incorporated in the 2019 edition. Some simplifications too were carried out by merging categories of buildings like offices, colleges & schools in non-residential buildings and hostels and various types of housing in one single category of residential buildings. Also, the separate group of load bearing structures in each category of buildings was removed and only a sub head of composite (partially RCC framed and partially load bearing) structures was added. In the proforma for calculation of Cost Index weightages of materials and labour components too were revised.

During past one year amendments/suggestions like inclusion of schools as separate category of rates & specifications, clarifying ambiguity in calculation of plinth areas and modifications for more realistic system of computing cost of services were offered by field units, other stakeholders and clients. Some suggestions are found useful & in line with present day needs, and felt apt for incorporation in plinth area rates. Therefore, having incorporated the useful suggested amendments and revising the rates of all categories of buildings by simply adding the Cost Index factor based on labour and materials rates as on 01.04.2020, extras, services and development components too having been revised on rates of labour & material prevailing as on 01.04.2020, this updated version of PAR is being brought out as Plinth Area Rates 2020.

The Plinth Area Rates 2020 (with base 01.04.2020 as 100) comprises of followings:

Latest Plinth Area Rates with base 100 as on 01.04.2020 (for non-residential/residential Buildings in RCC framed/composite structures along with services and development of site components.

And

Plinth Area Rates for specialized E & M works as on 01.04.2020.

Annexure-I (a) to (e):	General specifications for residential buildings, scale of amenities, scale of sanitary & water supply fittings and elect. installations in GPRA and specifications for non- residential buildings.
Annexure-II:	Guidelines for calculating plinth area.
Annexure-III:	Proforma for calculating cost index for future cost indices with base 100 as on 01.04.2020.
Annexure - IV:	Statement of cost indices of Delhi/NCR since 1955 till date

All efforts have been made to update Plinth Area Rates 2020 making it user friendly by incorporating the views and feedback from various stakeholders and the field units and making necessary simplifications.

I would like to acknowledge the lead taken by Sh. M.K.Mallick, Chief Engineer, CSQ(Civil), Sh. C.K.Varma, Chief Engineer, CSQ (Elect.) and dedicated efforts of Sh. Divakar Agrawal, SE(TAS), Sh. D.K.Tulani, SE,TAS(Elect.), Sh. S.N. Jaiswal EE(TAS-I), Sh. M.L. Prasad, EE(TAS-II), Sh.V.K.Khetan, EE TAS(Elect.), Sh. D.S.Adhikari, AE(TAS), Sh.Patta Madhu Kumar, AE(TAS), Sh. Mukesh Varma, Chief Estimator (Civil), Sh. Chalapaka Ramaraju, JE(Civil) and other staff of CSQ unit who have provided valuable inputs/datas in finalization of Plinth Area Rates 2020.

(Anant Kumar)
ADG (Tech)

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CPWD

PLINTH AREA RATES
as on 01.04.2020

Rate in ₹ per sqm

Sl. 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 metre	25800	27100	20700	-
1.1.2	Floor height 3.00 metre	-	-	-	19700
1.2	**COMPOSITE (PARTIALLY LOAD BEARING AND PARTIALLY RCC FRAMED) STRUCTURE (Upto six storeys)**				
1.2.1	Floor height 3.60 metre	21900	23000	17800	
1.2.2	Floor height 3.00 metre	-	-		16800
1.3	**EXTRA FOR**				
1.3.1.1	For seven to twelve storey For every additional storey.	100			
1.3.1.2	For thirteen to eighteen storey For every additional storey.	200			
1.3.1.3	For nineteen to twenty four storey For every additional storey.	300			
1.3.1.4	For twenty five to thirty storey For every additional storey.	400			
1.3.1.5	For thirty one to thirty six storey For every additional storey.	500			
1.3.1.6	For thirty seven to forty two storey For every additional storey.	600			
	Similarly extra rate per storey may be increased by Rs. 100 per sqm for the next set of six stories				
1.3.2	Every 0.3 metre or part thereof, additional/lesser height of floor above normal floor height of 3.60 metre / 3.00 metre	350			
1.3.3	Every 0.3 metre or part thereof, higher plinth height over normal plinth height of 0.45 metre (on ground floor area only).	350			
1.3.4	Every 0.30 metre or part thereof, deeper foundations over normal depth of 1.20 metre (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
		1500			600
1.3.6	RCC raft foundation (on ground floor area only)	10000			
1.3.7	Pile foundation (on ground floor area only)	16000			
1.3.8	Stronger structural members to take heavy load above 500 kg per sqm upto 1000 kg per sqm.	1700			

1.4	**BASEMENT FLOOR**	
1.4.1	Floor height upto 3.35 metre including water proofing.	31000
1.4.2	Add or deduct for every 0.30 metre, or part thereof, height against normal height of 3.35 metre.	1000
1.5	**FIRE FIGHTING**	
1.5.1	With wet riser system	800
1.5.2	With wet riser and sprinkler system	1200
1.6	**FIRE ALARM SYSTEM**	
1.6.1	Manual fire alarm system	250
1.6.2	Automatic fire alarm system	600
1.7	Pressurized mechanical ventilation system in the basements with supply duct of exhaust blowers (on basement area only)	1050
1.8	**STILT PORTION**	
1.8.1	Stilt portion of multi-storey up to floor height of 3.60 metre (on stilt area only)	8000
1.8.2	Every 0.30 metre additional height above 3.60 metre	200

Notes for building cost:

1) The rates for item no. 1.1 and 1.2 are inclusive of provisions for earthquake forces and other design loads/forces.
2) The rates for items are applicable on entire plinth area except for items no. 1.3.3, 1.3.4, 1.3.5, 1.3.6, 1.3.7, 1.7, 1.8.1, 1.8.2.
3) The rates mentioned above are inclusive of GST.
4) In case of basement, rate is inclusive of raft foundation; therefore rate as per item 1.3.6 shall not be taken separately.
5) In case of more than one basement, the lower most basement shall be considered as basement whereas the upper basements shall be treated as floors.

		Non-Residential Buildings			Residential Buildings	
Sl. No.	**Description**	**Offices & Colleges**	**Hospitals**	**Schools**	**Hostels**	**Quarters**
2.0	**SERVICES**					
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					
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%

Notes for building cost:

1. Third Party Quality Assurance (TPQA) charge of 1% shall be taken in estimate preferably on the request of client department.
2. In case of modular furniture, extra provisions for raceways, conduiting and LAN etc. shall be made on the basis of actual requirement.
3. LED fittings and fixtures are inclusive in internal electrical installation rates. No separate provision shall be made.
4. Percentage mentioned above means the percentage of building cost as per item 1.1/ 1.2 + 1.3.2.

Sl. No.	Capacity/ Persons	Speed in m/sec	Travel height	Price (₹ in lacs)	Extra for each additional floor (in ₹)
1	2	3	4	5	6
3	**LIFTS with power operated doors and AC variable voltage & variable frequency controls**				
3.1	**Passenger lift**				
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
3.1.8	20 **(Bed lift)**	0.75	G+4	24	1,10,000
3.1.9	20	1.5	G+5	27	1,10,000
3.1.10	20	2.5	G+12	75	1,10,000
3.2	**Goods lift** (2 speed)				
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

Sl. No.	Description	Rates
4	WATER TANK (RCC)	₹ per litre
4.1	Overhead tank without independent staging	20
4.2	Overhead tank with staging height upto 20 metres	30
4.3	Overhead tank with staging height above 20 metres upto 30 metres	35
4.4	Overhead tank with staging height above 30 metres upto 40 metres	40
4.5	Underground sump	20
5	DEVELOPMENT OF SITE	₹ per sqm
5.1	Levelling	300
5.2	Internal roads & paths	
5.2.1	Internal road with WBM and bituminous top	1600
5.2.2	Internal road with WMM and bituminous top	1700
5.2.3	Cement concrete pavement with vacuum dewatered concrete	2200

5.2.4	Footpath with PCC base, 60 mm thick paver blocks and kerb stone edging on one side.	2600
		₹ per metre
5.3	External sewerage	3300
5.4	Filtered water supply	
5.4.1	Distribution lines upto 100 mm dia	1300
5.4.2	Peripheral grid 150 mm to 300 mm dia pipes	3600
5.4.3	Unfiltered water supply distribution lines	1700
5.5	Storm water drains	8600
5.6	Rain water harvesting (RWH)	3300
5.7	Trenches for services	6200
5.8	Boundary wall with 1500 mm height from ground level & 600 mm high MS grill including steel gates/wicket gates etc.	
5.8.1	Composite structure	8600
5.8.2	Precast RCC wall	7500
5.9	Horticulture Works	₹ per sqm
5.9.1	Horticulture operations including 300mm earth filling, grassing, tree plantations/shrubs and potted plants etc.	250
5.9.2	Vertical plantations	40

Notes for developmental works :

1. The rates mentioned as per sqm or per meter refers to the area or the running meter length of respective service as calculated from the layout plan.
2. For development of site, it would be desirable to design all the components under head 5 and cost estimate may be done as individual item with complete rates as per area/length of such components.

OR

Alternately, if it is not feasible to compute the exact area or length of development components from item no. 5.1 to 5.7, then the same may be considered for the entire plot area on proportionate building cost percentage basis as described below.

2.1 Compact building(s) site comprising of a single or close clustered multi storey high rise building(s) = 4.5% of building cost *

2.2 Semi compact / scattered building(s) site comprising of a few multi-storey buildings floor nos. = 6.0% of building cost *

2.3 Scattered building(s) site comprising of low rise buildings = 7.5% of building cost *

* Building cost = The cost of building/building(s) for entire plinth area calculated at rates as per 1.1 / 1.2 + 1.3.2

General Notes :

1. Provisions for extra ordinary requirements over and above those provided in this PAR may be additionally accounted for.
2. Cost of bulk services like water supply, sewage disposal as mentioned in (a) & (b) below are not included in these rates and extra provisions as per requirement may be made.

(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 up to point of disposal etc.

3. None of the specialized E&M services are included in the above rates and necessary provisions are to be considered.

4. 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 the roof.

(b) Masonry work in super structure with autoclave aerated concrete (AAC) blocks/ fly ash bricks.

(c) Window with reflective glass coating / high performance double glazed unit.

(d) Paints with low VOC options.

(e) Rain water harvesting.

(f) Provision of pillar cock having infrared sensor and foam flow technology (in offices, colleges and hospitals).

(g) Dual plumbing system.

PLINTH AREA RATES FOR SPECIALISED E&M WORKS

Rate in ₹

Sl. No.	Description of Item	Unit	Rate
1	SUB-STATION EQUIPMENT		
1.1	Supplying, installation, testing and commissioning of 33 kV/0.433 kV or 11 kV/0.433 kV substation equipments comprising HT panel, dry type transformers, HT cable, bus trunking from transformer to LT panel, LT panel, 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 sub station to the buildings fed by the sub station.	per kVA	9000
2	DIESEL GENERATING SETS		
2.1	Supplying, installation, testing and commissioning of silent type DG sets, AMF panel, bus ducting/ cables from DG sets to essential panel, synchronizing panel where required, 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.	per kVA	11000
3	33 kV RECEIVING SUBSTAION AND 33 kV/11 kV HT CABLING		
3.1	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 under ground cabling to the distribution substations on ring main system, substation earthing, substation safety equipments.	per kVA	6000
3.2	Supplying, installation, testing and commissioning of 33 kV switch room comprising of 33 kV HT panel, inter connections, 33 kV HT under ground cabling to the distribution substations on ring main system, earthing, safety equipment.	per kVA	6000
4	UNINTERRUPTED POWER SUPPLY		
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.	per kVA	20000
4.2	Add for every additional 30 minutes backup	per kVA	9000
	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.		
5	CENTRAL AC PLANT		
5.1	Supplying, installation, testing and commissioning of energy efficient central AC plant including low side works	per TR	85000
5.2	Extra for stand-by chilling units high side	per TR	38000
6	VRV/ VRF AC SYSTEM		
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.	per HP	55000
7	PRECISION AIRCONDITIONING SYSTEM		
7.1	Supplying, installation, testing and commissioning of precision air conditioning system including piping, electrical cabling, controller etc. required for the system	per TR	110000
8	SOLAR PHOTO VOLTAIC POWER GENERATION SYSTEM		
8.1	Supplying, installation, testing and commissioning of grid interactive roof top solar photo voltaic power generation system including space frame	per kWp	65000

Sl. No.	Description of Item	Unit	Rate
9	SOLAR WATER HEATING SYSTEM		
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	Each	22500
9.2	For higher capacity in multiples of 100 litres.	per 100 litres	22500
10	CCTV SYSTEM		
10.1	Supplying, installation, testing and commissioning of IP based CCTV system for building security comprising of PTZ fixed camera, cabling, recording , display system and hard ware software support – for indoors only {Rate applicable on total plinth area}	per sqm	200
10.2	For external surveillance (Rate applicable on total plot area minus plinth area at ground floor)	per sqm	200
	Note: Rate includes peripheral IP based PTZ camera besides indoor camera at reception, corridors, lift lobby etc., wiring upto CCTV room and setting up monitoring unit/ units, as required.		
11	ACCESS CONTROL SYSTEM		
11.1	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)	per sqm	200
12	IBMS: INTEGRATED BUILDING MANAGEMENT SYSTEM		
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 sq.m) (Rate applicable on total plinth area)	per sqm	400
12.2	Add extra for built up area above 10,000 sq mtr. (Rate applicable on total plinth area)	per sqm	125
13	HYDROPNEUMATIC WATER SUPPLY SYSTEM		
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	per LPM	1500
14	LIGHTING AUTOMATION INCLUDING OCCUPANCY SENSORS		
14.1	Supplying, installation, testing and commissioning of lighting automation including occupancy sensors (Rate applicable on area to be specified by client)	per sqm	200
15	BASIC HOME SECURITY FOR RESIDENTIAL COLONY		
15.1	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 CCTV system to be installed at the entry and exit points, parking areas, entry point of each dwell ing unit and other common areas as required including CCTV control room, required under ground cabling, recording system and monitor/ monitors in the control room: Intercom system. (Rate applicable on plinth area excluding service/common areas).	per sqm	300
15.2	CCTV system (Rate applicable on plinth area excluding service/common areas).	per sqm	300
16	LAN SYSTEM		
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).	per sqm	500

Sl. No.	Description of Item	Unit	Rate
17	IP BASED EPABX SYSTEM		
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).	per sqm	500
	NOTE: It will be economical to use common infrastructure of switches, OFC, CAT 6A cable for both voice and networking.		
18	Conference hall: supplying, installation, testing and commissioning of audio visual/conference system (Rate applicable on carpet area of Hall only)	per sqm	10000
19	STREET LIGHTING WITH LED		
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).	per sqm	150
	Note: This is applicable for plot sizes more then 1 acre. For smaller plot sizes actual requirements may be worked out		
	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.		
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		
20.1	Plant size upto 50,000 LPD	per thousand litres	75000
20.2	Plant size above 50,000 upto 1,00,000 LPD	per thousand litres	60000
20.3	Plant size above 1,00,000 LPD	per thousand litres	50000
21	DRIVER FACE AND AUTOMATIC NUMBER PLATE RECORDING SYSTEM/RECOGNITION SYSTEM		
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	per set	725000
22	BAGGAGE SCANNERS		
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	per unit	2125000
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	per unit	3500000
23	DOOR FRAME METAL DETECTOR		
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	per set	350000

Sl. No.	Description of Item	Unit	Rate
24	MEDICAL GAS PIPELINE SYSTEM		
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.	per bed	60000
	MODULAR OPERATION THEATER		
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.		
25.1	With stainless steel technology	per OT	8500000
25.2	With SMS technology	per OT	12500000
	Note: The above rates are based on minimum OT size of 50 sqm		
26	BOOM BARRIER		
26.1	Electromechanical boom barrier with all accessories upto 6 meter length.	each	125000
27	CAR PARKING SYSTEM		
27.1	Sensor based car parking system with controller, display etc. as required. (cost based on minimum car capacity of 250)	per car	10000
28	EMERGENCY LIGHT & ILLUMINATED SIGNAGES		
28.1	Illuminated signages (Rate applicable on total plinth area)	per sqm	20
29	Motorized steel gates upto 6.00 metre. width	per gate	500000

ANNEXURE-I (a)

GENERAL SPECIFICATIONS FOR RESIDENTIAL BUILDINGS

Sl. No.	Description	Applicable Specifications				Remarks
		Type-I, II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII / Bungalows	
1	**FOUNDATION**					
	Foundation & structure	As per structural requirements	Same as Type-I, II & III	Same as Type-I, II & III	Same as Type-I, 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-I, II & III	Same as Type-I, II & III	Same as Type-I, 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-I, II & III	Same as Type-I, II & III	Same as Type-I, 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-I, II & III	Same as Type-I, II & III	Same as Type-I, II & III	Any other energy efficient suitable local material in consultation with architect and structural engineer
3	**DOORS AND WINDOWS** **a) Frames(except of toilet/bath& WC)**					
	i) Door	Hard wood / seamless mild steel tubular frame 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 stainless steel wire mesh. For internal doors single rebate frames.	Same as type-I, II & III	Same as type-I, II & III	2nd 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 2nd class teak wood / uPVC extruded frame sections with minimum wall thickness of 2 mm in single rebate.	

Sl. No.	Description	Applicable Specifications				Remarks
		Type-I, II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII / Bungalows	
	ii) Window	Hard wood / uPVC extruded frame sections with minimum wall 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.	Same as type-I, II & III	Same as type-I, II & III	2nd calls teak wood / uPVC extruded frame sections of minimum wall 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	Hard wood / uPVC extruded frame sections with wall thickness minimum 2.0 mm / FRP / PVC, compatible to doors shutters	Same as Type-I, II & III	Same as Type-I. II & III	2nd 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 servant area	Not admissible to Type-I, II and III	For domestic help's quarters same as Type-I to Ill	For domestic help's quarters same as Type-I to Ill	For domestic help's quarters same as Type-I to Ill	
	b) Shutters					
	i)Main door/ external door shutters	Double shutters, one mild steel grill door with mosquito proof stainless steel wire mesh of SS-304 grade, painted and other 35 mm thick factory made flush door shutter both side commercial veneered and painted.	Same as Type-I 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 stainless steel frame with mosquito proof stainless steel wire-mesh of stainless steel -304 grade and stainless steel fittings and other with 35 mm thick factory made exterior grade both side decorative veneered type flush door shutter with melamine polish.	Same as Type-V &VI	
	ii) Domestic help's area	Not admissible to Type-I, II and III	For domestic help's quarters same as Type-I to III.	For domestic help's quarters same as Type-I to III.	For s domestic help's quarters same as Type-I to III.	

Sl. No.	Description	Applicable Specifications				Remarks
		Type-I, II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII / Bungalows	
	Kitchen door (Preferably to be avoided)	35 mm thick hard wood shutter having 12 mm thick both side commercial veneered ply or	Same as Type-I, II & III	35 mm thick hard wood shutter having 12 mm thick both side decorative veneered ply or	Same as Type-V & VI	
		same wood panel at the bottom part and stainless steel wire mesh at upper part.		same wood panel at the bottom part and stainless steel wire mesh at upper part.		
	Bath, WC & toilet door	25 to 30 mm thick, FRP / PVC panelled doors	Same as Type-I, 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 hard wood styles and rails with 12 mm thick commercial ply/ wood paneling or factory made flush door shutters both side commercial ply veneering and painted.	Same as Type I, II & III	35 mm thick, 2nd class teak wood styles & rails with paneling of 12 mm thick teak ply / teak wood / 5.5 mm thick float glass glazing or 35 mm thick factory made exterior grade both side decorative veneered type flush door shutter with melamine polish.	Same as Type-V & VI	
	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 hard wood with glazing of 4 mm float glass and other with stainless steel SS-304 grade wire-mesh in place of glazing.	Same as Type I, 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 2nd class teak wood with glazing of 4 mm float glass and other with stainless steel SS-304 grade wire-mesh in place of glazing.	Same as Type-V & VI	

Sl. No.	Description	Applicable Specifications				Remarks
		Type-I, II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII / Bungalows	
	Domestic help's area (doors & windows)	Not admissible to Type-I, II and III	For domestic help's quarters same as Type I to III	For domestic help's quarters same as Type I to III	For domestic help's quarters same as Type I 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)	Same as Type I, II & III	Same as Type I, II & III	Stainless steel (SS-304) 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.
4	**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 gang-saw cut pre-polished granite / marble/ stone of approved shade/ double charged vitrified tile flooring of size not less than 600 x 600 mm / scratch resistant engineered wood or laminated wooden flooring only in living /drawing room. granite, marble, stone & tiles.	Same as Type V & VI	
	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/double charged vitrified tiles (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	

Sl. No.	Description	Applicable Specifications				Remarks
		Type-I, II & III	**Type-IV, IV (Special)**	**Type-V & VI**	**Type-VII & VIII / Bungalows**	
	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-I,II & III	Anti-skid vitrified tiles of size not less than 400 x 400 mm with water absorption less than 0.08% laid seamless 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% laid seamless with joints finished with matching grout.	
	Kitchen counter	Granite stone 18 mm thick with nosing	Granite stone 18 mm thick with nosing	18mm thick gang-saw cut pre-polished granite with nosing as per design	Same as Type-V & VI	
	Common circulation area	Mirror-polished kota stone / locally available stone as approved by architect and matching skirting as per architectural drawing.	Same as Type-1, II & III	18 mm thick pre-polished granite / vitrified tiles (with water absorption less than 0.08%) of size not less than 600 x 600 mm.	18 mm thick gang-saw cut pre-polished granite / marble stone of approved shade/ vitrified tiles (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-I, II and III	For domestic help's quarters same as Type 1, II & III	For domestic help's quarters same as Type 1, II & III	For domestic help's quarters same as Type 1, II & III	Finishes in all rooms shall be as per the finishes of Type-1 to III in respective rooms
	Common circulation area in servant quarters	Not admissible to Type-I, II and III	Mirror-polished kota stone / locally available stone	Same as Type-IV & Type-IV(special)	Same as Type-IV & Type-IV (special)	Use of locally available stone shall be as per approval of Chief architect
	Main Staircase	Pre-polished kota stone in single length of treads & risers	Same as Type-1, II & III	18 mm thick Pre-polished / honed / flamed finish granite in single length of treads & risers	Same as Type-V & VI	Nosing design in treads shall be as per architectural design
	Fire escape staircase	Pre-polished kota stone in single length of tread & risers	Same as Type-1, II & III	Single length pre-polished kota stone in Tread & Risers	Same as Type V & VI	- Do -
	Toilets / bathroom/ WC	Glazed ceramic anti-skid of size not less than 300 x 300 mm. including grouting the joints.	Same as Type-1, 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.	

Sl. No.	Description	Applicable Specifications				Remarks
		Type-I, II & III	Type-IV, IV (Special)	Type-V & VI	Type-VII & VIII / Bungalows	
	Skirting in rooms and other areas	100 to 150 mm high skirting matching the floor material.	100 to 150 mm high skirting matching the floor material.	100 to 150 mm high skirting matching with the floor material.	100 to 150 mm high skirting matching the floor material.	
	b) Dado Kitchen dado	Ceramic / vitrified tiles of size not less than 200 x 300 mm as per design from floor up to full height.	Same as Type-I, II & III	Ceramic / vitrified tiles of size not less than 300 x 450 mm as per design from floor to full height	Ceramic / 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	Glazed ceramic / vitrfied tiles of size not less than 200 x 300 mm up to full height with decorative bands at certain intervals.	Same as Type-I, II &III	Glazed ceramic / vitrified tiles of size not less than 300 x 450 mm up to full height with decorative bands at certain intervals	Glazed ceramic / vitrified tiles of size not less than 300 x 450 mm up to full height with decorative bands at certain intervals.	
5	**FINISHES**					
	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 wails & 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	
	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-I, 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-I, 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 hardwares, as per architectural design and specifications.	Yes, (with shelves)	Yes, (with drawers)			
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 hardwares 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 hardwares 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 2100 mm height
	Factory made wardrobe carcases, 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 hardwares as per the approved sample.			One in each bed room upto ceiling height	One in each bed room upto ceiling height	

Item No.	Item	Type-I, II & III	Type-IV & IV Special	Type-V & VI	Type-VII & VIII	Domestic help's Qtrs.
	hardwares as per the approved sample.					
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 I,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.	Kota stone /green marble	Kota stone/granite	Marble/ granite	Marble/ granite	Kota stone

ANNEXURE-I (c)

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

Sl. No.	Item	Type-I,II&III	Type-IV& IV Special	Type-V &VI	Type-VII & VIII	Domestic help's Qtrs.
1	Orissa WC pan (European style) with low level dual flushing PVC cistern	One	One	One	One	One
2	European type floor mounted/wall-hung WC with seat, lid and low level dual flushing PVC cistern.	Yes (In Type-II, and III)	Yes	Yes	Yes	-
3	Water jet/health faucet with European WC.	Health faucet with each European WC	Health faucet with each European WC	Health faucet with each European WC	Health faucet with each European WC	
4	Wash basin with CP brass mixture type for hot & cold water with single lever with quarter turns ceramic cartridges.	One	One in each toilet & one for dining area as per design.	One in each toilet & one for dining area as per design.	One in each toilet & one for dining area as per design.	One
5	Tap (kitchen, toilet, bath & WC) CP brass/PTMT bib cock provided with quarter turns ceramic cartridges.	Two in kitchen, one in each toilet, bath & WC. PTMT in Type-I & II and CP brass in Type-III	Two in kitchen, one in each toilet, bath & WC-CP Brass	Two in kitchen, one in each toilet, bath & WC-CP brass	Two in kitchen, one in each toilet, bath & WC-CP Brass	Two in kitchen, one in each toilet, bath & WC-PTMT
6	Shower with CP brass mixture type tap for hot & cold water with single lever, ceramic cartridges quarter turn.	One in each toilet/bath	One in each toilet/bath	One in each toilet/bath	One in each toilet/bath	-
7	Towel rail CP brass / PTMT.	One PTMT in each toilet/bath	One CP brass in each toilet	One CP brass in each toilet	One CP brass in each toilet	One PTMT in toilet / bath
8	Mirror with PTMT glass shelf.	600 x 450 mm with each wash basin	600 x 450 mm with each wash basin	As per design with each wash basin	As per design with each wash basin	600 x 450 mm with each wash basin
9	CP brass/ceramic toilet paper holder with European WC.	Yes in Type-III only	Yes	Yes	Yes	
10	Soap rack / niche as per architectural design and specification.	One in each bath/toilet	One in each toilet	One in each toilet	One in each toilet	
11	Plumbing for water purifier and geyser.	Yes	Yes	Yes	Yes	Yes
12	Storage tank of capacity as per NBC 2016 provision of separate tank for WC & drinking water.	Separate tanks for kitchen and toilets as per requirements for dual flushing system.	Separate tanks for kitchen and toilets as per requirements for dual flushing system.	Separate tanks for kitchen and toilets as per requirements for dual flushing system.	Separate tanks for kitchen and toilets as per requirement for dual flushing system.	Separate water tanks to be provided for servants, in each type of flats.

ANNEXURE-I (d)

SCALE OF AMENITIES FOR ELECTRICAL INSTALLATION IN GENERAL POOL RESIDENTIAL ACCOMODATION

Sl. No.	Description	Type-I	Type-II	Type-III	Type-IV & IV (Special)	Type-V	Type-VI	Type-VII& VIII	Domestic help's Qtrs.
1	**Power points** (15 amp 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	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 6	**Total 8**	**Total 8**	**Total 12**	**Total 15**	**Total 17**	**Total 22**	
2	**Plug points** (5 amp)	1 in each room 1 in kitchen 1 in balcony area	1 in each room 1 in kitchen 1in balcony area	1 in each room 1 in kitchen 1 in balcony area	1 in each room 1 in kitchen 1 in balcony area	1 in each room 1 in kitchen 1 in store 1 in main balcony	1 in each room 1 in kitchen 1 in store 1 in each balcony	1 in office 1 in each room 1 in kitchen 1 in store 1 in each balcony	Total 2
		Total 4	**Total 5**	**Total 5**	**Total 7**	**Total 8**	**Total 9**	**Total 12**	
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 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 3	**Total 4**	**Total 4**	**Total 11**	**Total 10**	**Total 12**	**Total 12**	
4	**Ceiling fans**	1 in living room 1in each bedroom	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 3**	**Total 4**	**Total 6**	**Total 6**	**Total 12**	**Total 14**	
5	**Call bell points**	1	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, 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 & 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	

Sl. No.	Description	Type-I	Type-II	Type-III	Type-IV & IV (Special)	Type-V	Type-VI	Type-VII& VIII	Domestic help's Qtrs.
8	**Geyser point** (with MCB connected socket outlet with wiring)	1 in bathroom	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					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 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
12	**Telephone point** As per the approval of competent authority	1 in living room	1 in living room	1 in living room	1 in drawing room	1 in drawing room 1 in each bedroom	1 in office 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 for LED bulbs** (without bulbs)					3 in drawing room 3 in dining room 2 in each bedroom 1 in kitchen	3 in drawing room 3 in dining room 2 in each bedroom 2 in kitchen	3 in office 3 in drawing room 3 in dining room 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 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 3	**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. As far as possible, concealed wiring shall be used in all electrical works. LED light fixtures shall only be used as per directives of competent authority.

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:-	Aerated cement concrete (ACC) blocks.
2.3.1	Office / college / hospital	Light weight autoclaved aerated concrete (AAC) blocks.
2.3.2		Gypsum blocks.
2.3.3		Non asbestos double skin cement boards.
2.3.4		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.
3.0	**DOORS & WINDOWS**	
3.1	Frames	
3.1.1	Door frames:- Office / college / hospital	Door frames of 2nd class Indian teakwood or equivalent in officer's room. anodized / powder coated/ polyester powder coated aluminium 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 hardwood/extruded hollow mild steel pipes (minimum 2 mm thickness).
3.1.2	Window frame:- Office /college / hospital	uPVC extruded sections of window frame / Aluminium 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	Panelled type in 2nd class Teak wood or flush door with teak veneered ply/ commercial ply or anodized/powder coated/ polyester powder coated aluminium 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.
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 aluminium shutters/ standard uPVC/WPC section for windows with toughened glass glazing.
	Schools	Standard uPVC window sash shutters with double layered glazing/ mild steel Z-section steel shutter members.
3.4	Fittings	Anodized aluminium / stainless steel (SS-304) or equivalent.
3.5	Fire check door	As per fire safety specifications.

Item No.	Description	Specifications
4.0	**FLOORING**	
4.1	Main entrance hall:- Office / college / hospital	Pre polished granite flooring.
	Schools	Pre polished granite flooring in entrance lobby.
4.2	Corridors:- Office / college / hospital	Matt finished vitrified tiles/granite flooring/combination of marble and granite
	Schools	Kota stone flooring and corresponding skirting.
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	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	Kota stone flooring.
5.0	**STAIRCASE**	
5.1	Internal staircases:- Office / college / hospital	Single piece granite or marble flooring in treads & risers with dado of matching permanent finish specifications.
	Schools	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	Single piece kota stone flooring in treads & risers with dado of matching permanent finish specifications.
6.0	**RAILING:-** Office / college / hospital	Stainless steel (SS-304) railings.
	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	

Item No.	Description	Specifications
9.2.1		Cement plaster in wet areas
9.2.2		Dry acrylic paint / distemper in service area & basement.
9.2.3		Acrylic emulsion paint/ textured paint (low V.O.C) over POP
9.2.4		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 signages & lifts etc.GRC (glass reinforced concrete) tiles in ramp area.

ANNEXURE II

GUIDELINES FOR WORKING OUT PLINTH AREA

(For purpose of calculating plinth area as per IS code: 3861-2002)

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.

General:

1. The total plinth area of a building shall be the sum total of plinth area at every floor level and plinth area of the following :

   (i) Basement.

   (ii) Floor without cladding (Stilted floor).

   (iii) Floor of varied floor heights including top floor which may be partially covered.

   (iv) Garages.

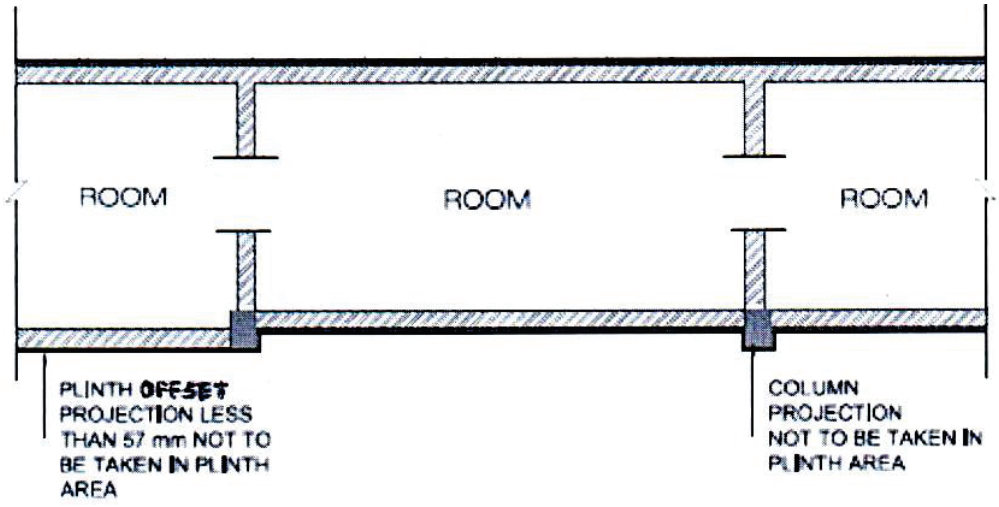
2. The plinth area of S.No. (i) to (iv) as mentioned above, shall be measured separately and shall not be clubbed together, so as to enable the cost computation at different rates per sqm as worked out for varied heights or categories.

3. If there is more than one basement, the lower most basement shall be termed as basement and upper basement shall be treated as floors.

A. For the purpose of calculating the plinth area, the following shall be included :-

a. Areas of walls at floor levels excluding plinth offsets (if any). When buildings consists of columns and columns are projecting beyond cladding, the area shall be taken only up to external face of cladding {Refer sketch-1} (in case of corrugated sheet cladding, outer edge of corrugation shall be considered).

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.



Sketch -1

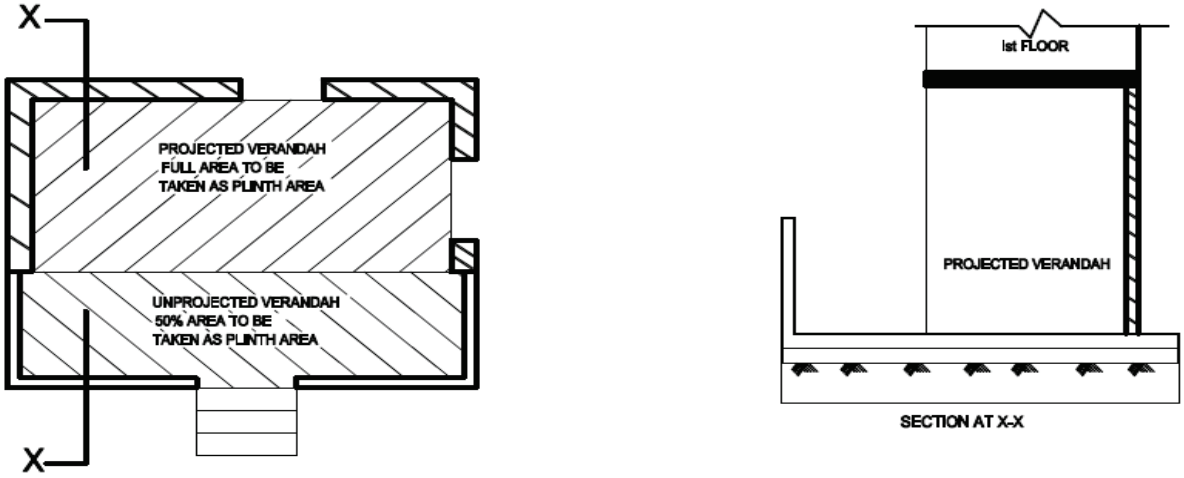
b. Shafts & ducts

c. Stair Cases

d. In case of open verandah with parapets at ground floor; {Refer Sketch-2}

(I) 100 percent of area for the portion protected by projections above and,

(ii) 50 percent of area for the portion unprotected from above.



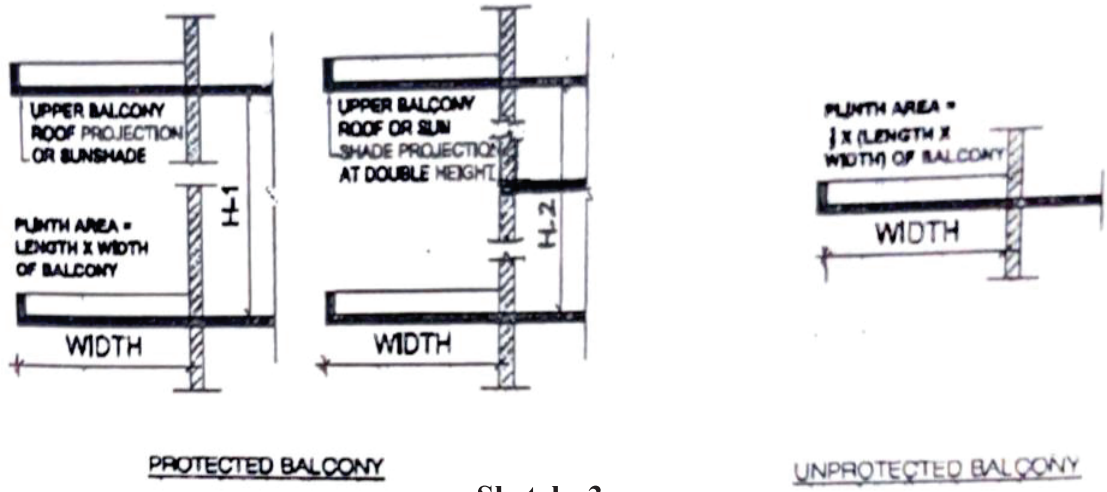
Sketch -2

e. In case of balconies {Refer sketch-3}

(I) 100 percent of area, protected by projection above

(ii) 50 percent of area, unprotected balcony from above

Note: If balconies are proposed in staggered manner, that is covering slab of balcony is at double floor height then also it shall be treated as protected balcony and shall be measured as per (i) above.



Sketch -3

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

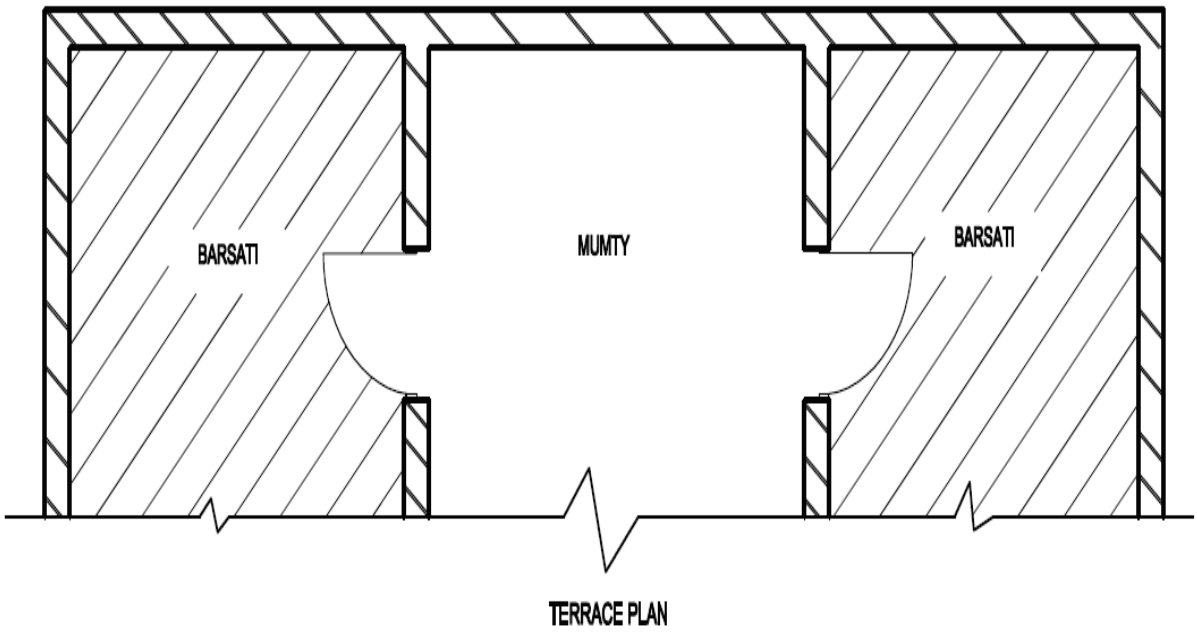
f. In case of alcove by cantilevering a slab beyond external walls;

(i) 25 percent of the area for the alcove of height up to 1.00 metre.

(ii) 50 percent of the area for the alcove of height more than 1.00 metre & up to 2.00 meter and

(iii) 100 percent of the area for the alcove of height more than 2.00 metre

g. Barsati (covered enclosure at terrace level) including mumty **(Refer sketch – 4)**



Sketch -4

h. Area of galleries i.e. upper floor seating area in an assembly hall, auditorium or theater to be included.

i. Area of an independent floor of shorter height of minimum 2.2 metre or 1.80 metres (if allowed by bye-laws) between two main floors with access stairs leading to it, is termed as mezzanines floor and shall be included in the Plinth Area, though may be measured separately (as costing may be different)

j. Open stair cases/ spiral stair cases for the purpose of fire escape or service with no enclosing / covering structure from sides, are to be considered for 50 percent plan area of stair at each floor level.

k. Mumty, machine room, turrets, domes etc. (only if the height of walls/structure/enclosure exceeds 2.25 m clear of terrace.)

Note:

As per IS code 3861-2002, Note under (e) and para (j) & (k) are not to be included in plinth area. However, as shown above these are included in plinth area for the purpose of cost computation. NIT approving authority may decide, whether to include or not to include the areas of these three categories for payments when the tenders are called on EPC mode.

B. The following shall not be included in the plinth area

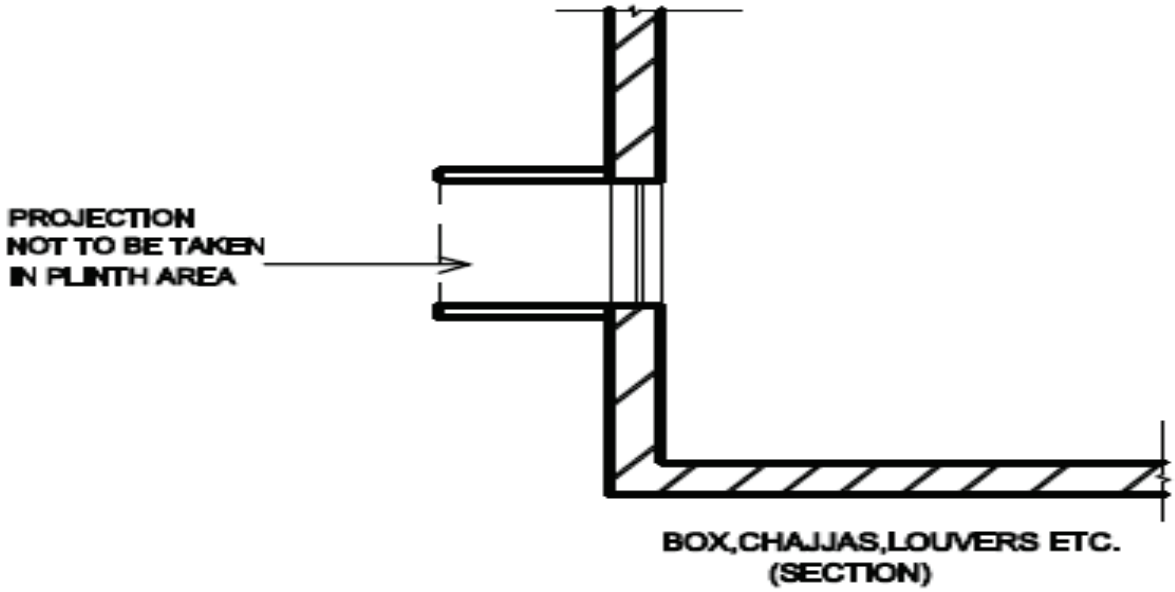
a. Area of loft (i.e. an intermediate partial slab between two floors, having no direct access stair)

b. Area of Architectural bands, cornices etc. projecting from external face of walls.

c. Area of vertical sun-breakers or box louvers projecting out and other architectural features, for example slab projection for flower pots etc. {Refer Sketch-5}

d. Open platform

e. Terrace



Sketch- 5

ANNEXURE –III

PROFORMA FOR CALCULATION OF BUILDING COST INDEX

Sl. No	Description	Unit	%age	Rates as on 01.04.2020 (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%	4300.00	4300.00	4300.00	8.00	-	-
2	Cement (OPC)	qtl.	100%	484.00	484.00	484.00	14.50	-	-
3	**TMT Steel Reinforcement bar**								
a.	8 & 10 mm dia	qtl.	50%	4250.00	2125.00	4250.00	19.50	-	-
b.	12 & 16 mm dia		50%	4250.00	2125.00			-	-
4	Aggregates 20 mm a) Natural sources	cum	75%	1380.00	1035.00	1297.50	6.50	-	-
	b) Aggregates 20 mm (RCA)		25%	1050.00	262.50			-	-
5 (a)	Sand (coarse sand) Natural sources	cum	75%	1400.00	1050.00	1192.50	3.00	-	-
(b)	Sand (coarse sand) RA		25%	570.00	142.50			-	-
6	**Flooring Items**								
a.	Vitrified tiles	sqm	50%	515.00	257.50	707.50	5.00	-	-
b.	Ceramic tiles		20%	290.00	58.00			-	-
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%	170.00	56.66	136.65	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/aluminium/steel**								
a.	35 mm thick flush door shutters both side commercial veneering	sqm	30.00%	1000.00	300.00	2057.50	7.00	-	-
b.	Factory made, standard Z-section steel windows		15.00%	1750.00	262.50				
c.	uPVC windows		20.00%	3450.00	690.00			-	-
d.	Aluminium window		35.00%	2300.00	805.00			-	-
9	**Pipes**								
a.	15 mm GI pipes	metre	10.00%	90.00	9.00	312.60	2.50		
b.	100 mm CI pipes		40.00%	665.00	266.00				
c.	20 mm clack conduits		20.00%	68.00	13.60				
d.	20 mm CPVC pipes		30.00%	80.00	24.00				
11	**Lamps & Fans**								
a.	Ceiling fans 1200 mm	each	50%	1550.00	775.00	1033.50	4.50		
b.	1200 mm LED tube lights with fittings		40%	625.00	250.00				
c.	LED bulbs		10%	85.00	8.50				

Sl. No	Description	Unit	%age	Rates as on 01.04.2020 (in ₹)	Proportionate value (in ₹)	Weightage rates (in ₹)	Weightage of Component	Rates at the time of revision of Cost Index	Cost Index
12	Electrical machinery, Motor 7.5 HP (pump set) 1500 RPM (Kirloskar)	each	100%	22500.00	22500.00	22500.00	2.50		
13	**Wires & cables**								
a.	Copper wire 1.5 sqmm	100 metre	70%	1300.00	910.00	1843.00	4.00		
b.	Copper wire 4.0 sqmm		30%	3110.00	933.00				
14	**Labour**								
a.	Skilled	each	50%	764.00	382.00	696.50	20.00		
b.	Unskilled		50%	629.00	314.50				
						Total	**100.00**		

Note:

In the above proforma at Sl. No. 4 & Sl No. 5, Aggregates – 20 mm and Sand (coarse sand) are considered in two parts (a) & (b) respectively. (a) representing 75% from Natural source and (b) representing 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 can be considered.

ANNEXURE-IV

STATEMENT OF COST INDICES OF DELHI/NCR SINCE 1955

Year	Effective Date	Cost Index	Base 100 of PAR
1955	17.05.1955	100	1955
1962	12.01.1962	118	1955
1962	18.09.1962	131	1955
1966	19.07.1966	148	1955
1969	15.01.1969	157	1955
1969	17.06.1969	168	1955
1969	15.10.1969	181	1955
1970	01.01.1970	100	1970
1971	05.04.1971	120	1970
1972	03.05.1972	134	1970
1973	24.12.1973	166	1970
1975	26.06.1975	180	1970
1976	01.10.1976	180	1970
1976	01.10.1976	100	1976
1977	30.12.1977	113	1976
1978	31.03.1978	116	1976
1979	31.03.1979	130	1976
1980	10.04.1980	176	1976
1981	23.04.1981	200	1976
1982	29.01.1982	217	1976
1982	30.03.1982	221	1976
1983	16.03.1983	245	1976
1984	13.03.1984	274	1976
1985	27.06.1985	312	1976
1986	09.07.1986	340	1976
1987	16.06.1987	370	1976
1988	31.03.1988	397	1976
1988	01.11.1988	421	1976
1989	31.10.1989	494	1976
1990	31.03.1990	521	1976
1991	11.02.1991	564	1976
1991	31.03.1991	595	1976
1992	31.12.1991	664	1976
1992	01.01.1992	100	1992
1992	31.03.1992	104	1992
1994	01.01.1994	117	1992
1995	01.06.1995	132	1992
1996	01.06.1996	142	1992
1997	01.06.1997	145	1992
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
2006	01.04.2006	236	1992
2007	01.04.2007	254	1992
2007	01.10.2007	260	1992
2007	01.10.2007	100	2007
2008	01.04.2008	114	2007
2008	01.10.2008	119	2007
2009	01.04.2009	113	2007
2009	01.10.2009	126	2007
2010	01.04.2010	136	2007
2010	01.10.2010	139	2007
2011	01.04.2011	149	2007
2011	01.10.2011	151	2007
2012	01.04.2012	161	2007
2012	01.10.2012	170	2007
2012	01.10.2012	100	2012
2013	01.04.2013	100	2012
2014	01.04.2014	105	2012
2014	01.10.2014	107	2012
2015	01.04.2015	104	2012
2015	01.10.2015	103	2012
2016	01.04.2016	102	2012
2016	01.10.2016	101	2012
2017	01.04.2017	111	2012
2017	01.10.2017	115	2012
2018	01.04.2018	116	2012
2018	01.10.2018	118	2012
2019	01.04.2019	118	2012
2019	01.04.2019	100	2019
2019	01.10.2019	98	2019
2020	01.04.2020	101	2019
2020	01.04.2020	100	2020

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.

CPWD

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1. Sh. Anant Kumar, ADG, Tech.
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3. Sh. C.K.Varma, Chief Engineer, CSQ (Elect.)
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7. Sh. M.L. Prasad, EE (TAS-II)
8. Sh.V.K.Khetan, EE TAS (Elect.)
9. Sh. D.S.Adhikari, AE (TAS)
10. Sh.Patta Madhu Kumar, AE (TAS)
11. Sh. Mukesh Varma, Chief Estimator (Civil)
12. Sh. Chalapaka Ramaraju, JE (Civil)

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Government of India

Ministry of Housing and Urban Affairs

CENTRAL PUBLIC WORKS DEPARTMENT