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केंद्रीय लोक निर्माण विभाग
तकनीकी अनुप्रयोग एवं मानक एकाई
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No: 62/SE(TAS)/PAR/FCI Godown/397-98 Date: 11/10/2019

MEMORANDUM

Plinth area rates for Food Grains Storage Godown were last released by the Authority of DG (W) in April 1987 vide reference no. 55W(NDZ)/SW/V/IV/674 (A)/79 dated 30.04.1987. During past 32 years no cost index specific to Food Grains Storage Godown were issued by the department.

In the recent past CPWD has been entrusted with four projects of FCI Godown in North East and another 22 sanctioned projects for construction of Food Grains Storage Godowns of various capacity are in pipe line with FCI. For such projects Preliminary Estimates by various field units of CPWD are required to be submitted to FCI authorities for their A/A & E/S. FCI authorities were facing problems in processing the P.E. (s) in the absence of latest PAR for Food Grains Storage or the Cost Index specific to Godowns. FCI authorities vide their letter dated 05.08.2019 requested for updation of PAR.

Accordingly as per directions the Plinth Area Rates for Food Grains Storage 2019 has been prepared incorporating change in Specifications and provisions like RWH as per present day construction practices.

The Plinth Area Rate for Food Grains Storage-2019 (with base 01.04.2019 as 100) comprising of following Annexures is released herewith duly approved by DG, CPWD.

Annexure-I: Plinth Area Rate for Food Grains Storage-2019 indicating unit costs of Godown building, attached components and other ancillary buildings (from item no. 1.1 to 1.10) Services (2.1 to 2.3) and Development (3.1 to 3.10).

Annexure-II: Proforma for calculating Cost Index of Food Grains Storage Godown for future cost indices with relation to base 100 as on 01.04.2019, indicating weightages of various components as per present day construction practices.

Annexure-III: Specifications for Food Grains Storage Godown considered for arriving at rates as per Annexure-I. These specifications are in line with the latest construction technologies and some other mandatory requirements.

This issues with the approval of DG, CPWD.

Superintending Engineer (TAS)
CSQ, CPWD, Nirman Bhawan,
New Delhi

EE(TAS) 11/10/2019 Ch. Engr.

Annexure-'A'

PLINTH AREA RATES FOR FOOD GRAINS STORAGE GODOWNS AS ON 01.04.2019

Sl. No.	Description of Items/Head	Rate (Rs.)	Unit (Per)
1.1	Main Godown building single storey composite structure (i.e. brick masonry load bearing with RCC columns & RCC bands at three levels i.e. plinth, lintel and top) with 5.60m clear height upto truss tie member and 1.20 m high plinth from formed ground level.	10460/-	Sqm
1.2	Extra for every 0.30m additional height above the height of 5.60 m upto 6.35 m height.	175/-	Sqm
1.3	Extra for using random rubble stone work in place of brick work in foundation footing & plinth (Main godown area only)	195/-	Sqm
1.4	Open Platforms with plinth height 1.20m from formed ground level. (i) 3.05 m wide rail-red side (ii) 2.44m wide road-fed side	 7220/- 7755/-	 Sqm Sqm
1.5	Covered Platforms with plinth height 1.20m from formed ground level. (i) 3.05 m wide rail-fed side (ii) 2.44m wide road-fed side	 10770/- 11890/-	 Sqm Sqm
1.6	Extra for random rubble stone work in place of brick work in footings & retaining wall upto plinth for: (i) For platform 3.05 m wide rail-red side (ii) For platform 2.44m wide road-fed side	 240/- 265/-	 Sqm Sqm
1.7	Extra for using Hot Dip Galvanized steel tubular pipes (as per IS 4923 in place of standard black tubular pipe in trusses) (i) Main Godown Building (ii) 3.05 m wide Covered Platform (ii) 2.44 m wide Covered Platform	 103/- 72/- 83/-	 Sqm Sqm Sqm
1.8	Extra for using 0.71mm thick Aluminium Alloy roofing sheets (as per IS designation 31500, temper Hx8 confirming to IS 737) in place of precoated galvanized iron profile sheets 0.60 mm completed thickness) in truss roofing. (i) For main Godown Building (ii) For 3.05 m wide Covered Platform (ii) For 2.44 m wide Covered Platform	 554/- 632/- 609/-	 Sqm Sqm Sqm
1.9	Other ancillary buildings (i) Office cum Store (ii) Switch Room cum Santary box (iii) Canteen area and Lavatory Block.	19500/-	Sqm
1.10	Cycle cum Scooter Shed.	6930/-	Sqm
	Services		
2.1	Internal water supply & sanitary installations (i) For office area only	5%	On Office Plinth Area Cost
	(ii) For lavatory blocks	25%	On Lavatory Block Plinth Area Cost
2.2	Internal electrical installations i/c wiring cabling etc.	5%	On Entire Plinth Area
2.3	Third Party Quality Assurance	1%	On The Entire Plinth Area Cost
	Development		
3.1	Levelling (including cutting, filling and compaction upto formation of a uniform ground level)	770/-	Sqm (On Entire Plot Area)
3.2	Internal roads (with complete compacted thickness between 565 to 600 mm as per design requirements) (i) With WMM & Bituminous Top.	2630/-	Sqm
	(ii) RMC Design Mix Concrete Road.	3755/-	Sqm
3.3	Footpath 1.50 m wide with paver blocks toping & cement concrete kerb stones edging.	2365/-	Mtr.
3.4	Rain water drainage lines grid (on either side of roads or between road edge & platforms) leading to RWH recharge pits.	6790/-	Mtr.
3.5	External water supply grid to office building and lavatory blocks from submersible bore well outlet.	1190/-	Mtr.
3.6	Under ground Water Storage Tank (for fire fighting) of 25000 litres capacity @ Rs. 18/- per litre	4,50,000/-	Each
3.7	Septic tank of appropriate capacity for 2 years cleaning interval (i) For office block (for 50 users).	2,00,000/-	Each
	(ii) Between two lavatory blocks (for 100 users)	4,00,000/-	Each
3.8	Boring of tube well and pump house	10,00,000/-	Each

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3.9	Weigh bridge: Mechanical/Electronic equipments and allied Civil work.	10,00,000/-	Each
3.10	Street lighting i/c SITC of LED street/compound lights/high mast/pathways lighting for entire campus	150	Sqm (On Entire Plot Area)
3.11	Boundary wall in brick masonry with intermediate columns and 0.60 mtr. high M.S. grill with 0.60 mtr. Dia concertina coil supported in M.S. angle iron "Y" with G.I. barbed wire (considering i/c steel gate 6.00m wide every 500 m length of boundary wall)	15000/-	Mtr.
3.12	Boundary wall in Random Rubble with intermediate columns and 0.60 mtr. high M.S. grill with 0.60 mtr. dia concertina coil supported in M.S. angle iron "Y" with G.I. barbed wire (considering i/c steel gate 6.00m wide every 500 m length of boundary wall)	16000/-	Mtr.
3.13	Precast RCC Boundary Wall with precast RCC "H" shaped columns of size 300x250 mm and horizontal precast RCC strands of size 2.00 mtr. long, 0.25 mtr. wide and 0.08 mtr. thickness, with G.I. barbed wire fencing 0.60 mtr. high 0.60 mtr. dia concertina coil supported in M.S. angle iron "Y" with G.I. barbed wire (considering i/c steel gate 6.00m wide every 500 m length of boundary wall)	9000/-	Mtr.

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Annexure-'B'

PROFORMA FOR CALCULATION OF COST INDEX OF FOOD GRAINS STORAGE GODOWNS

BASE 100 AS ON 01.04.2019

Sl. No	Description	Unit	%age	Rates as on 01.04.2019	Proportio-nate value	Weightage rates	Weight-age of Compo-nent	Rates at the time of revision of cost index	Cost Index
1	Bricks (Fly Ash)	1000 Nos.	100%	4400.00	4400.00	4400.00	9.45	-	-
2	Cement (OPC)	Qtl.	100%	503.00	503.00	503.00	15.15	-	-
3	TMT Steel								
a.	8 & 10 mm dia	Qtl.	50%	4085.00	2042.50	4085.00	5.25	-	-
b.	12 & 16 mm dia		50%	4085.00	2042.50			-	-
4	Aggregates 20 mm & down	Cum	70%	1350.00	945.00	1335.00	13.50		
	Aggregates 40 mm and above		30%	1300.00	390.00				
5	Sand (Coarse Sand)	Cum	67%	1350.00	905.00	1202.00	11.55	-	-
	Fine/River sand		33%	900.00	297.00			-	-
6	Good earth	Cum	100%	170.00	170.00	170.00	0.35		
7	Structural steel								
a.	Sectional windows	Qtl.	13%	5400.00	702.00	4176.00	1.20		
b.	Structural sections	Qtl.	47%	4600.00	2162.00			-	-
c.	Holding down boards	Qtl.	16%	6100.00	976.00			-	-
d.	Rolling shutters	Sqm	24%	1400.00	336.00			-	-
8	Paints								
a.	Synthetic Enamel Paint	Litre	40%	170.00	68.00	248.00	0.30	-	-
b.	Premium acrylic paint		50%	170.00	85.00			-	-
c.	Dehradun lime	Qtl.	5%	600.00	30.00			-	-
d.	White cement based putty		5%	1300.00	65.00				
9.	Tubular truss	Qtl.	100%	5700.00	5700.00	5700.00	8.60	-	-
10.	Pre-coated PPGI Profile sheets	Sqm	100%	350.00	350.00	350.00	4.90		
11	Pipes								
a.	15 mm GI Pipe	Metre	15%	85.00	12.50	309.15	1.00		
b.	150 mm Rigid PVC Pipes		65%	442.80	287.80				
c.	20 mm Black Conduits		20%	43.00	8.60				
12	1200 mm LED tube lights with fittings	Each	100%	1400.00	1400.00	1400.00	1.25		
13	Wires & Cables								
a.	Copper Wire 1.5 Sq. mm	100 Metre	50%	900.00	450.00	1550.00	1.50		
b.	Copper Wire 4.0 Sq. mm		50%	2200.00	450.00				

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14	Hire charges for machines tool & plants								
a.	Production cost	Cum	58%	350.00	203.00	439.35	6.00		
b.	Pumping & laying with piping hire charges	Cum	24%	210.00	50.40				
c.	Tipper	Tonne/Km	3.50%	3.00	0.10				
d.	Moter Grader	Hour	5%	2450.00	122.50				
e.	Front Loader		2.75%	900.00	24.75				
f.	Hydraulic Excavator		1.75%	875.00	15.30				
g.	Vibratory Roller		1.50%	600.00	9.00				
h.	Generator		1.25%	300.00	3.75				
i.	Surface Vibrator		0.75%	400.00	3.00				
j.	Wet Mix Plant		0.75%	800.00	6.00				
k.	Water Tanker		0.50%	150.00	0.75				
l.	Pin Vibrator		0.25%	350.00	0.80				
15	**Labour**								
a.	Skilled	Each	50%	710.00	355.00	647.00	20.00		
b.	Unskilled		50%	584.00	292.00				
						Total	**100.00**		

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Annexure-'C'

Specification for Food Grains Storage Godowns and attached Civil Works.

1. Leveling and formations of uniformly leveled ground level:-
   The entire plot area to be leveled by earth work in cutting filling/banking and compaction. The level so achieved shall be termed as Formed Ground Level. This formed ground level shall be ±0.00 m with respect to top of rail carriage tier/base of rail.
2. Foundation (considering bearing capacity of soil 10 Tonnes per sqm. or more):-
   i) Entire periphery of main godown shall have spread footings foundation for wall panels and Isolated RCC Column footings for intermediate columns.
   ii) Wall panel footings may be taken as 1.20 m below formed ground level where as intermediate RCC columns footings may be taken upto 2.00 m deep (proper designing must be got done.)
   iii) Plinth height for main godown shall be 1.20 m above the formed ground level.
   iv) Adjoining 3.05m wide platform on rail-fed side and 2.44 m wide on road-fed side shall be formed with masonry footings and 0.345m thick masonry wall upto plinth, footings of these platform edging/perimeter walls may be 0.90m deep from formed ground level.
3. Superstructure:-
   All walls i.e. two longitudinal walls, two gable walls and two Intermediate Partition walls shall be 0.345 m thick brick masonry walls with intermediate RCC columns 0.345x0.46/0.46x0.46. This super structure with 3 RCC bands of appropriate thickness and equivalent to the width of the panel walls have also been considered at three level i.e. plinth level, lintel level and top level (just beneath the truss tie member) at 5.60m or 6.35 m as may be required.
4. Door Windows & Ventilators:-
   Rolling shutters for door openings, sectional steel fixed/openable windows and ventilators are considered. Also IRC jail in front of windows in each wall panel upto lintel level is considered.
5. Flooring:-
   In main godown buildings and adjoining platforms 52mm thick cement concrete hardened floor top is to be laid over 150mm thick RCC bearing course which rests over 100mm thick plain cement concrete base under which lies 20 cm thick sand filled cusion course and compacted earth filling in layers of 20 cm thickness upto required depth.
   In office area flooring may be Rectified Tiles flooring over 10 cm thick cement concrete base and 15 cm sand filling and 22.50 cm earth filling. In store area top layer of Rectified Tiles may be altered with 40mm thick plain cement concrete flooring.
   In other ancillary buildings tiled floor or cement concrete floor or kota stone floor may be laid as per requirements.
6. Roofing:-
   In main godown area tubular truss with attached structural members resting on RCC band on top of columns shall be fixed with provision of square or rectangular tubular pipes as purlins over which Prepainted G.I profile sheets of 0.60mm completed thickness shall be fixed with long self driving screws M-6 with hexagonal head and 3mm thick EPDM washers.
   Over adjoining 3.05mm or 2.44mm wide platforms too similar structural roof truss (one way) must be provided with proper fixing arrangement to RCC columns with sufficient length and dia G.I holding down bolts.

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Also from these platforms trusses gutters, down take drainage system with Regid PVC pipes and fittings of 160mm dia (OD) along with necessary manholes within platform and drainage pipes from these manholes to drains are considered.

In Office & Store Buildings, Lavatory Blocks, Switch Room cum Guard Cabins, Canteens etc. RCC roof slab with COBA treatment tiles and grouting etc. shall be provided.

7. Finishing:-

   Inside main godown upto 1.20m from plinth top 15mm thick cement plaster in two layer with floating coat has been provided, over this height of 1.20m, 12mm thick cement plaster of mix 1:6 with White Washing of Dehradum lime is considered. Where as on outside of main godown 15mm cement plaster of mix 1:6, finished with Acrylic Smooth Paint. Similar finishing on outermost face of godown platforms plinth walls too have been considered.

   All the steel members shall be primered with red oxide and painted with Synthetic Enamel Paint.

8. Covered drains:-

   On the periphery of godown with platforms 46cm wide 55cm deep drain with brick work, RCC, Cement Concrete base and 15mm thick cement plastered with floating coat of neat cement is considered. This drain shall be provided with 150mm thick precast perforated RCC slab covers resting on cement concrete blocks on top of the side brick work.

9. Roads:-

   Two type of roads have been suggested and either of two can be adopted considering the heavily loaded trucks movement Type-1 is with GSB-150mm thick, 2 layers of WMM-150mm, 75mm thick layer of DBM each and 40/50mm thick bitumastic concrete on top and the other type comprises of GSB-200mm thick, 150mm thick dry lean concrete sub base and 250mm thick top RMC in roads & taxi track with slight reinforcement. Out of these two the 2nd one is most recommended.

10. As per 3.11, 3.12 & 3.13 these type of boundary walls are suggested, either one or combination of two at different locations within the site can be considered as per requirements.

Note:- 1. It is recommended that as far as possible concrete for plain cement concrete or reinforced cement concrete must be obtained from the automatic RMC plants in the neighborhood. If no automatic RMC plant is operating as mentioned above batching and mixing plant of appropriate capacity must be installed at site itself.

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