

OFFICE OF THE CHIEF ENGINEER, PWD (B & R), RAJASTHAN, JAIPUR.

CIRCULAR No. 19 (Building 6)

Sub : General Instructions to be followed while preparing detailed estimates.

It has been observed that while submitting estimates for Technical sanction instructions contained in Section 5 of the Manual of Orders of PWD/B&R and those issued by previous Circular are not followed strictly, it is therefore, enjoined upon all the detailed estimates for works costing more than Rs. 3.00 lacs and requiring technical sanction by Addl. Chief Engineer and submitted to this office should contain the following schedules and details :

1. SCHEDULES :

1.1 Schedule-I (Technical Report) :

Proforma at Annexure 'A' may be used for submission of a detailed report which should be full & comprehensive and preferably written by the Executive Engineer.

1.2 Schedule-II (General Abstract) :

It should indicate abstract cost of the sub-work included in the sanctioned proposal and provide for the increase in the market rates as may be approved by Superintending Engineer.

1.3 Schedule-III

Detailed estimates of each sub-work with abstract of cost and details of quantities.

1.4 Schedule-IV (Drawing) :

(a) The drawings accompanying the detailed estimates should be as follows :

(i) A site plan showing the situation of the proposed building with reference to others, the various structure in proximity to the intended site, the North point, the prevailing direction of the wind and other matters capable of graphic delineation which may have influenced the selection.

(ii) A ground floor plan or plans of the building and plans of the foundations and of various storeys as required.

(iii) Section through the buildings of such number and in such directions are necessary to exhibit the intended form and dimensions of every part.

(iv) Such elevations as are necessary.

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- (v) A drawing or drawings showing the general arrangement of the floor and roof and the distribution of timbers, iron work etc. and such working drawing as will enable the officer responsible for the project to judge the details.
- (b) The drawings should bear the signatures of authority approving the plan and other details duly attested by Superintending Engineer.
- (c) The drawings should clearly indicate the proposed works, existing portions, dismantling work (if required in the existing building) in different colours.

2. GENERAL CONDITIONS :

- 2.1 The total estimated cost of the proposed construction should not exceed the Administrative sanction. Only such work which can be built within the sanctioned amount should be included in the detailed estimate. Detailed estimate for the portion of work, which is although essential as per requirement of concerned department but can not be included on account of inadequate sanction may be submitted as part 'B' to facilitate to move the case for Revised/Supplementary Administrative sanction.
- 2.2 In the case of estimate for Additions and Alterations the drawings and specifications of existing buildings should also be submitted along with the estimate. If there is any deviation from existing specifications, proper justification for the changes may be reported.
- 2.3 Estimate should be submitted in quadruplicate so that a copy of sanctioned estimate may be retained in Chief Engineer's office and the remaining three could be made available for circle, divisional and sub divisional office.
- 2.4 In the detailed estimates, the dimensions assumed in working out the quantities should be susceptible of identification of the dimensions shown on the drawings. Cross references to the dimensions of the estimates and also drawings should be indicated.
- 2.5 The items of detailed estimate should conform to the specifications described in technical report and also the PWD specifications.
- 2.6 Provisional rates for non-BSR items must be supported invariably by detailed rate analysis approved by Superintending Engineer.
- 2.7 All building estimate must include detailed estimates for sanitary, electrification, water supply and development works and no lump-sum provision on percentage basis should be provided in the estimate.
- 2.8 Estimates for works incorporating RCC items must include complete RCC details and bar bending schedules so as to facilitate in arriving at the correct quantities of concrete and steel.
- 2.9 Wherever necessary, detailed estimates may be supported by sketches to supplement drawings.

- 2.10 It those cases where a portion of work or entire work has already been taken in hand/executed before issue of sanction the quantities of complete portion should be taken as per actual measurements and a certificate to this effect may be recorded by the Executive Engineer. The specifications already adopted should also be clearly indicated in the technical report.
- 2.11 Detailed design for foundations and other structural components should be sent alongwith the estimate.
- 2.12 The type of soil met within the foundation, the test carried out for assessing the SBC of the soil at the foundation level, the SBC of the soil and the justification for the type of foundation adopted should be given.
- 2.13 The Executive Engineer and Superintending Engineers should particularly examine the foundation, the specifications for floors, roof windows and doors, ornamental features, finishing item etc. and observe in the forwarding letter or in the report itself the need for adopting expensive specifications.

Annexure 'A' to Circular No. 19 (Building-6)

TECHNICAL REPORT

1. GENERAL

- 1.1 Name of Work
- 1.2 Circle
- 1.3 Division

2. AUTHORITY

- 2.1 Reference of Sanction
- 2.2 Amount of Administrative/Financial sanction (including/excluding the prorata charges).
- 2.3 Reference and Abstract details of Forecast estimate (if any).
- 2.4 Reference of Technical sanction of work if any issued earlier.

3. LOCATION AND LAND

- 3.1 Location
- 3.2 Area
- 3.3 Possession taken over/not taken over.

4. REFERENCES OF APPROVED DRAWING

S. No.	Details	Drawing No.	Authority
1.	Site Plan		
2.	Plans		
3.	Sections		
4.	Elevations		
5.	Details of components.		
6.	Sanitary, Water Supply and Drawing		
7.	Electrifications		
8.	Other drawings.		

5. DISCUSS THE PLANS SECTION & ELEVATIONS GENERAL

6. ESTIMATED COST

Estimated cost of portion shown in 'Red' Drawing No..... including/exclusive of prorate charges has been worked out as Rs.....

7. SOURCE OF MATERIAL

8. TYPE OF SOIL/S.B.C.

9. BRIEF SPECIFICATION (In case of A/A specification of existing may also be indicated)

- 9.1 Foundation concrete.
- 9.2 Masonry in Foundation and plinth.
- 9.3 Damp proof course.
- 9.4 Superstructure (Type and specifications)
- 9.5 Lintels, Sun-shades etc.
- 9.6 Roofing
- 9.7 Interior finish
- 9.8 Exterior finish
- 9.9 Flooring (a) Base (b) Finish
- 9.10 Skirting and Dados
- 9.11 Windows (Frame, Panels, Wire gauging, Safety bars)

- 9.12 Doors (Frame and Shutters)
- 9.13 White/Colour/Cement line/Decorative finish
- 9.14 Painting of Doors, Windows and Walls
- 9.15 Electrification (Type of Wiring, Fittings and Fixtures)
- 9.16 Sanitary & Water Supply
- 9.17 Compound wall and it's gate
- 9.18 Other specifications.
- 10. **SPECIAL FITTINGS AND FIXTURES (Fans, Tube-lights, Exhaust, Pumps, Elevators etc.)**
- 11. **AGENCY FOR EXECUTION**
- 12. **PRESENT STAGE OF EXECUTION**
- 13. **COST ANALYSIS**
 - 13.1 B.S.R. adopted and premium approved by Superintending Engineer.
 - 13.2 Tender Premium (Received/expected).

S.No.	Component	Total Cost	Cost/Sqft.	% age of total cost
(a)	Foundation & plinth			
(b)	Superstructure work			
(c)	Roofing.			
(d)	Doors, Windows & Frames.			
(e)	Flooring.			
(f)	Finishing.			
(g)	Sanitary & water supply.			
(h)	Electrification.			
(i)	Development.			
(j)	Other items.			
	Total-			

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Total plinth area cost of Rs. /Sft. is higher/lower than the plinth area rate
Rs. adopted in forecast estimate.

14 OTHER SALIENT FEATURE THAT NEEDS SPECIFIC MENTION

Assistant Engineer

Executive Engineer

Superintending Engineer