

Submission of proposal regarding designs of projects to be entrusted to the Central Design Organisation.

Government of Maharashtra,
Irrigation Department,
Circular No.CIO 1084/(385/84)-PHJ-2

Dated the 31st December, 1984.

- Reference :
- (1) Government Circular No.CIO 1066-I(2), of 4th May, 1972.
 - (2) Government letter No.MIF 2276/1123/(635)P-2, of 15th July, 1976, addressed to Superintending Engineer, Central Design Organisation (PH), Nashik.
 - (3) Government letter No.MNS 1081/230-MIN(1) of 27th May, 1981.
 - (4) Government letter No.MNS 1082/588-MIN(1), dated the 9th November, 1982.

In the above Government Orders the procedure regarding the preparation of drawings and designs of major/medium/Minor/Hydro Projects have been laid down for the Central Design Organisation and field officers. It is decided to compile the orders in one form for guidance to the Central Design Organisation and Field Officer under Irrigation Department.

2. As per the present orders, the nature of work of Central Design Organisation is as under :-

- i) Initial work of project investigation and approval from Central Water Commission/Central Electricity Authority is done by project investigative circles. The work of preparation of detailed designs and drawings with respective designs reports of various components of major irrigation and hydro projects is to be carried out by Central Design Organisation with coordination of all the regions, after collecting required data from field officers.
- ii) Preparation of detailed designs and drawing for the head works of Medium and Minor Irrigation Projects having heights more than 30.00 metres or having special problems.
- iii) Preparation of designs of spill ways for flood discharge more than 3.5 metres or a fall of 10. m or more.
- iv) Design of head regulators having head of 14 m or more.
- v) Designs and planning of canal structures of major projects where the structure is costing more than Rs.50.00 lakhs.
- vi) Examination and approval to the designs of canal structures, prepared by the contractor.
- vii) Designs for strengthening of the concrete dams from design point.
- viii) Special problems related to designs and allied issues of any completed project or during the construction are to be studied in Central Design Organisation and remedial measures suggested as per Government directives.
- ix) Design flood studies of all major and medium projects which are referred to Central Design Organisation.

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x) Guidance to the field officers for Central Water Commission compliance on Hydrology.

3. The above functions of the Central Design Organisation are based on various Government orders issued from time to time. Now it is decided that the proposals of drawing and design in cases as detailed below will be submitted by Central Design Organisation to Government for approval.

MAJOR PROJECTS INCLUDING HYDRO PROJECTS.

(A)

1. General layout of earth dam with foundation data, G.P. and zoning, drainage.
2. Overall layout of headworks including outlets and spillway with approach and tail channels.
3. General layout of masonry dam with zoning and gallery layout and special treatment for item like seepage prevention, special foundation treatment etc.
4. General layout of spillway with approach and tail channel.
5. General layout of outlets (Irrigation, Power and Water Supply) with their approach and tail channels. Hoist Room and Energy Dissipation arrangements.
6. Instrumentation in dams, layout drawings, showing locations and types.
7. Non-standardised gates, their layout drawings and gate drawings or proposals for new standardization of gates.
8. Any non-conventional design for head work component and canal structures costing more than Rs.25 lakhs.
9. Canal structures costing more than Rs.50 lakhs or design involving any special site features.
10. Overall layout of the hydro project.
11. Layout of intake structure for power outlet.
12. Designs of head race tunnel, Pressure shaft etc.
13. Design of surge, if any.
14. Design of tail race tunnel and tail surge, if any.
15. Design of tail channel, in respect of Hydro project.
16. In addition to the above items for hydro projects, proposals involving major changes in the approved layout like tunnel replacing a canal, addition or commission of lining to the conduit or a canal, underground power houses in place of surface ones, number of penstocks etc.
17. Any (Major, Medium or Minor) design items referred to Central Design Organisation by outside bodies as consultation job.

(B)

MINIMUM PROJECTS : The designs for components of projects which satisfy the requirements of Sr.No. 1 to (17) in para 2 above.

(4) any special design item not covered in A and B above but about the design of which advice of Central Design Organisation is considered necessary by Regional Chief Engineer and which the Superintending Engineer, Central Design Organisation would like to refer to the Regional Chief Engineer.

4. All designs not covered in para 2 and 3 above shall be finalised by the field officers.

5. All designs pertaining to Central Design Organisation and not covered in para 3 above and 4 above will be finalised by Superintending Engineer, Central Design Organisation, except in cases for which Superintending Engineer, Central Design Organisation would like to get approval of Regional Chief Engineer for any specific design item.

6. Yearly programme of designs by Central Design Organisation will be approved by Chief Engineer, Central Design Organisation.

7. The above information is generally based on the instructions issued from time to time. Field officers have to act as per the Government Orders and from time to time taking into consideration the points mentioned in this circular.

(S. H. Karve)
Under Secretary to the Government

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No. CD/ED/Circular/ 537 General Design Organisation,
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Dated the 6 March 1955.

Copy forwarded to the Executive Engineer - 1/57-2/
11-3/104/11-1/104/S.E.(CD), C.L.O., Basin for
and necessary action.

S. H. Karve

O.D. Signed by S. E. (CD) for Superintending Engineer (CD)