

No. NHIII/Misc/23/77

Dated the 22nd March, 1977

To

All Secretaries of the State P.W.Ds.,
(dealing with Roads)

Subject : Application of Network Techniques (CPM/PERT Charts) on Road and Bridge construction projects financed from Central funds

I am directed to refer to this Ministry's letter No. NHIII/Misc/129/74, dated the 9th June, 1976 on the subject mentioned above and to say that the matter has been further considered and it is felt that for exercising adequate control on road/bridge construction projects financed from Central funds it may be necessary to adhere to the requirement of PERT/CPM Charts. In order that the above requirement is duly implemented, the following suggestions are under consideration :—

- (i) To make a beginning, it is felt that the requirement of CPM/PERT Charts will be made **mandatory**, in respect of Centrally financed road/bridge works each costing *Rs 1 crore or more*. Later on, with the increased knowledge and experience

of application of such Network Techniques on road/bridge construction projects, it may be possible to consider their application even on works costing Rs 50 lakhs or so.

- (ii) In order that the requirement at (i) above is duly implemented, it is felt that the *N.I.T. documents for all such works shall make specific provisions for the contracting firm to furnish a complete CPM/PERT Chart considering all activities right from the award of the work to its completion. This Chart shall be furnished by the firm and got approved of by the Department, latest within one month of the award of work and shall invariably form part of the contract agreement.* In order to ensure that this requirement is not over looked, the N.I.T. should make a specific provision that in case the contracting firm fails to abide by this condition to submit the chart within a month as above, no payments shall be made, and the contract will be liable to be cancelled, forthwith.
- (iii) PERT/CPM Charts enclosed by the tendering firms with their bids shall be critically examined to see that they are practicable and possible to be achieved before the same are accepted. The following points should also be kept in view while scrutinising said Charts :
 - (a) The CPM/PERT Chart shall include all events and activities right from the award of work to its completion with their durations, sequence, slack, etc. in case a particular activity is not correctly represented in regard to its duration or order of occurrence or both, the same shall be got altered before accepting such a CPM/PERT Chart;
 - (b) The activities which are shown to be occurring during the monsoon period shall be such as are possible to be executed in the said period;
 - (c) The activities pertaining to approval of designs and drawing shall be carefully examined to see that these are realistic. For example, the activity relating to the approval of design of the superstructure shall not be a prerequisite for taking up the execution of well foundations. It should also be ensured that duration shown for approval of design of a component is adequate and precedes the construction activity of the said component.
 - (d) If during the course of execution of a work, revision or updating of the PERT/CPM Chart becomes necessary, the same shall be done by the contractor in consultation with the Engineer-in-Charge without altering the final target date of completion. However, specific provision should be contained in the N.I.T. to ensure that the intermediate targets, i.e. major mile stones of the work are achieved on prescribed dates and failing to do so by the contracting firm, he shall be liable to pay as compensation certain agreed amount, which should be laid down in the N.I.T. itself.

2. Since the Ministry is eager to finally consider and suggest implementing enforcing the above requirements early, it is requested that the views of the State Government on the same may please be forwarded latest by the end of April, 1977 so that thereafter the Ministry could issue a final communication to States. In case no reply is received, it shall be presumed that the proposal meets the approval of the State Government.