

## CIRCULAR

Subject :-

Preparation of detailed proposal for Construction of bridges across S.H./M.S.H./M.D.R. which have been included or proposed to be included in the budget of 95-96 : Guidelines for collection of survey data and prerequisites for inspection of the proposed sites by the S.E./E.E. of Design's Circle Bombay.

- (I) A No. of Bridge works have been included or proposed to be included in the State Budget of the year 1995-96. This office has given line plans in some cases on the basis of P.S.D. furnished by the respective R.P.Dns. as an aid for arriving at the rough cost of the bridge work for inclusion in the Budget.

In most of the cases the sites have been tentatively proposed by the R.P.Dns. but the same are yet to be inspected by the designs wing and finalized. In order to frame detailed technical bridge proposal the following requirements need to be observed carefully. Proposals for providing high level bridges in place of or adjacent to the existing submersible bridges.

(i) A elastic data requiring the frequency and duration of traffic interruptions caused during last 10 years (minimum) should be obtained . The interruptions caused due to extra ordinary floods having recurrence period exceeding 50 years (viz. Monsoon of 1994 in case of some rivers) should be eliminated from this data.

(ii) The correct flood level which needs to be crossed should be carefully suggested for a high level bridge as well as submersible bridge.

(iii) It is very difficult to construct a high level bridge across the streams and rivers on the S.H.s/ M.D.R.s which are passing along on very near to the banks of the major rivers (like Wainganga, Godavari ) such sites are predominantly affected by back water due to flood in the main river. This involves a very wide flood spread for a considerably longer duration in the tributary channel . The cost of approaches with a high embankment and heavy treatment for protection work for the receding floods is involved or the bridge length in has to be increased excessively . In such cases it is suggested to propose submersible bridge . If it is necessary to provide flood free access alternative routes available at a longer distance from banks of the main river say about 15 to 20 Kms (beyond zone of back water effect) be investigated where proposal for construction of a high level bridge would be desirable and economical also.

- (II) Guide lines for collection of survey data and pre-requisites for inspection of the proposed sites by S.E./E.E Design's Circle, Bombay.

- (i) The alignment of proposed/ alternative sites should be distinctly marked on the ground .
- (ii) If the stage-I Proposals are received, the position of abutments on both the banks should be tentatively marked.
- (iii) The relevant flood levels (ordinary flood level)(OFL), H.F.L. , Back water level etc.) should be marked on suitable permanent poles/ Ele. Poles/ Telephone poles trees etc. stated clearly in the report.
- (iv) The proposed R.T.L. should also be distinctly marked on both the banks.
- (v) Chainage stones along the x-sec at the proposed bridge site should be fixed & painted at site to facilitate locations of abutments/ piers on spot.
- (vi) The topo sheets covering complete catchment area up to the site should be procured and made available during inspection.
- (vii) It is desirable to measure the flood gradient when there is continuity in the flow of river and preferably OFL/ HFL levels. This could be arrived at by taking levels at sufficient distance on the U/S and D/S of the proposed bridge sites.
- (viii) The pattern of flow especially (i) the active channel sections and (ii) non flowing sections should be observed and marked on cross section. Ensuring monsoon is an ideal period for the spot observations and guidelines be issued accordingly.

It would normally be possible to inspect at an average 2-3 sites in a day and not more than 8 to 10 sites in one tour which may last for duration of about 3 days.

The programme for inspection will be informed in advance. It is expected that above points will be complied with.

O.C. approved by S.E.D.C.  
No.D.I./TC/2194  
Date :- 19/8/95  
Sd/-

For Superintending Engineer,  
Design's Circle,

Konkan Bhavan New Bombay