

preliminary estimate of cost furnished by the contracting officer, compensation for various alternates requested, a much clearer definition of the architect-engineer's responsibilities, a limitation on changes or provision for additional compensation for making them and more authority for the architect-engineer to exercise responsible judgment in the performance of his services. It is especially interesting to note that these comments were received even though not requested.

9. There are many criticisms of circumstances where an architect has been retained and has later retained an engineer on a subcontract basis; presumably, there would be similar criticisms from architects in the reverse situation. Engineers performing such work on a subcontract basis feel that they should participate in the negotiations between the architect and the contracting officer in order to be familiar with the obligations undertaken. They also criticize the inadequate information furnished them by the architect, requiring unnecessary revisions and changes in their work.

10. Comments of particular interest were received on a large number of different projects from an outstanding firm which does a great deal of soils and foundation work. On six fairly large sized jobs, the fee received by this firm was substantially inadequate and resulted in a fairly large loss. On one project for which the firm was not retained, after expending a very substantial amount of money on preliminary studies and surveys necessary for estimating and negotiating, the firm learned that it did not receive the job because of its supposedly high fee. This appears to be somewhat in conflict with the Department of Defense policy that consulting engineering services are not to be retained on a price basis. This firm is doing a large amount of similar work for numerous clients both public and private, on the same basis of fees which it sought in this instance.

C. ANALYSIS OF REPLIES

1. Replies on fees for specific projects were separated, tabulated and analyzed as set forth on the following sheets. It was necessarily difficult to make a uniform classification of projects, particularly because many overlap. They were assigned to the various categories set up in accordance with the best interpretation of the information furnished. Fees shown are the actual final fees reported for each project, including adjustments and extras. Construction costs of projects where shown are in accordance with the information furnished. Although there was very widespread criticism in the replies received of the unrealistic preliminary cost estimates upon which fees are based, comparatively few replies gave data on this point which could be included in an analysis. To do this would require both the preliminary estimate of cost of construction used in the fee negotiations and the actual cost of construction or the final estimated cost based on completed plans—both figures were furnished in only a few cases. The figures shown for actual cost of construction is either such actual cost or final estimated cost in event that the work did not proceed or the architect-engineer did not have available information as to the actual cost of construction. The percentages shown are based on the replies showing the architect-engineer's costs as a percentage of the total fee and his profit as a percentage of the total fee. Where a loss is involved, the profit is shown as a negative figure. As a matter of interest, the fees are shown as percentages of construction cost; for many reasons which are apparent, these percentages vary widely even within a given classification of work. The total dollar profit or loss for each given project is shown. Based on the total net profit for each category into which projects have been subdivided and the total fees represented, both the cost of doing the work and the profit or loss are shown as a percentage of the total fee. These percentages are, in effect, averages for all of the projects reported in that particular classification.