

Advantages of the Contract Method of Construction

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Our country is emerging from the greatest construction period of all times, superinduced, as you know, by the exigencies of war. This great volume of construction was undertaken and completed satisfactorily by the contract method under the direction of the United States Government. The general contractors of America accepted the great responsibilities thus imposed and discharged their obligations so satisfactorily that the results will stand as an everlasting testimonial to their skill, integrity, and responsibility and to the "advantages of the contract method of construction".

As we emerge from one unprecedented era of construction, there is every reason to believe that we are about to enter another, unattended by the pressures of war, but of great magnitude and equally important—namely, post-war construction. Therefore, my subject, "Advantages of the Contract Method of Construction", comes before us at an opportune time, at a time when we can consider its advantages dispassionately and evaluate them at their true worth.

DEFINITION

Before proceeding further, let us define what is meant by the "contract method". Under this method detailed plans are prepared, together with an engineer's or architect's estimate of cost. Competitive bids are taken and the award made to the "lowest responsible bidder". In many localities bidders are prequalified: that is, their ability to perform satisfactorily the work contemplated is verified before they are permitted to bid. The successful bidder is required to give bond that he will perform the work in accordance with the plans on a definite cost basis and within a definite time.

ADVANTAGES

Quality, Cost, and Time Guaranteed and Public Indemnified Against Loss. The contractor's work at every step is open to inspection.

The materials which go into his job are prescribed in detail and are tested frequently. A representative of the public is always on hand to see that plans and specifications are adhered to. This inspector does not represent the contractor, but the public. He is not influenced by the interests of the contractor and he is, therefore, not affected by natural tendencies to yield in the interests of economy or expediency.

Under the contract method the final cost of the job is known. The time of completion is known.

The public is relieved of the responsibility of buying materials and equipment, or hiring labor. The public takes no chances. Its representative, the engineer or architect, writes the specifications for what he wants, when he wants it, the price he wants to pay, and he gets just that. It has been well said, "No kind of an expert opinion in this country costs so little to obtain as the expert opinion of a guaranteed bid by contractors who will back up their testimony with their own cash."

The Rewards Offered and the Penalties Threatened Make for Efficiency. One fundamental advantage of the contract method has its root in human nature itself. A man naturally works harder for his own interests, where his own personal fortune is at stake, than he will as a mere representative of someone else's interest. If a man is in charge of an operation where he knows that every move he makes will mean either profit in dollars or loss in dollars, his mental attitude is quite different from what it would be where rewards and penalties are not so direct, and therefore not so forcefully felt by him. That is the reason a man as a contractor will handle an operation more efficiently than the same man as a superintendent working for the public.

The contract method hangs up handsome prizes for men who can find a cheaper way of performing their tasks. The drive to get the job finished in the most economical manner is back of every contractor and every man in his employ. That drive is bound to result in improved methods whose benefits never cease. A contractor must maintain his efficiency or go out of business.

The Necessity of More Complete Plans Means a More Satisfactory Structure. Of necessity, the contract method entails the preparation of the most complete and detailed plans. This careful preliminary study by skilled engineers and architects is always worth more than it costs. It prevents many costly mistakes. It always results in a more satisfactorily completed structure. The expensive future outlays so often encountered on hastily and inadequately planned projects are avoided. And, incidentally, this demand for better plans promotes

employment for and raises the standards of the architectural and engineering professions.

This Method Embodies the Benefits of Hard Experience and Strong Competition. There is available for construction work in every part of the country honest and keen competition between responsible companies managed by contractors of outstanding ability. The public is entitled to the benefits of their competition.

They are men who have established themselves in business through years of experience and pressure of competition, and who have become highly skilled in management and other features necessary in completing work economically.

What they undertake is complicated and difficult, and they do not remain in business in the face of the keen competition which they face, if they are not able to keep up with their fellows in improved methods and management.

Human nature requires checks and balances. Competition makes any business man more efficient. No contractor can continue to be low bidder. He always is on the lookout for the best talent and most efficient way of doing things. A contractor learns more from the result of one competition and a study of the method which beat him than any man can learn in years of day-labor work.

The contractor has had to climb a hard road to success. He has had to meet all kinds of competition and has had to pay for his mistakes with his own cash. Bitter lessons of experience have been indelibly impressed upon him, and he seldom makes the same mistake twice. In this hard school of experience he learns what tools will give best results on the project before him. He has developed a keen judgment of human nature, of the capabilities of men and their weaknesses. He has learned to inspire his men, and in his dealings with others has built up a respect for his skill, integrity, and responsibility. He delivers the goods, the kind he promised at the price he agreed. He has rightly been called "civilization's big tool".

TESTIMONIALS

Nation-Wide Experiment. Some years ago, the day-labor advocates pressed for day labor in the federal highway program; and as a result, in 1933 the Public Roads Administration tried a nation-wide experiment to determine the relative economy of the day-labor and contract method on highway construction. Often the actual project was selected by lot. Under no circumstances was the selection to be made so that it would

be known before the contractors submitted their bids. The state authorities having picked the projects from a number on which bids had been taken, rejected all bids, and the state highway departments proceeded to perform the work with their own forces. The project agreement between the state and the federal government required the work to be performed according to the same plans and specifications as governed the contractors' bids.

The following are excerpts from the testimony of Thomas H. MacDonald, Chief of the Public Roads Administration, given on this subject at a hearing before the House Roads Committee, January 22-23, 1935, in Washington, D. C.

In order to get a reasonable measure of the relative efficiency of contract and force-account works, we required each state to undertake at least one project by the force-account or direct-labor method. These projects were selected after bids had been taken in order to know what the work would cost if let to contract. These states have kept very careful records of the cost of doing the work by force account, and in practically all cases the cost has been higher by force account—some materially higher. . . . However, there is no question about the relative economy of contract work versus force-account work under the supervision of the public bodies.

When asked the principal reason for that increased economy in contract work, he replied:

The principal reason, I think, is that it is very difficult to get the same loyalty and performance from either material suppliers or the employees on the job, to the public, as the contractor can secure.

Other Testimonials. W. E. Reynolds, Assistant Director of Procurement, U. S. Treasury Department, has said:

It has been the policy of the Treasury Department, for years without number, to co-operate with the contractors of the country. We believe, in that way, work could be more specifically handled. With us, we believe that it should be a continuing policy. We believe it is sound policy to utilize the specialized art, personnel, equipment, and, if you will, integrity, of properly constituted contractors' organizations.

Major General E. M. Markham, Chief of Engineers, U. S. Army, has said:

The increased percentage of contract work has resulted from the policy to which this department has adhered, that its work shall be contracted, unless it can be clearly shown that this method is not economical and in the best interests of the United States. . . . It is, of course, apparent that the best construction work, with least un-

certainty and complication, is obtained from a contractor of recognized ability whose bid price is sufficiently high to afford a reasonable profit.

Hon. Harold Ickes, Secretary of the Interior, has said :

Force-account work is more expensive. When any town comes in with a proposal for force-account work, it means they have a political machine or want one.

Major General Lytle Brown, Former Chief of Engineers, U. S. Army, has said :

When I was a young man, out in one of the Engineer Districts doing work, I wanted to do it all by hired labor ; I didn't want the contractor to have a look-in ; because, in my bumptiousness and conceit, I thought that I could do it cheaper than any contractor could. And now, even to this day, I admire that spirit on the part of the young men out there in charge of work. I admire that spirit ; but I do not admire that judgment, because their field of view is limited. I feel certain that in the long run, the contractors of this country, the great builders of this country, with proper encouragement, can do all of the work that we have to do, and do it more economically than any Government agency can do it.

SUMMARY

In summarizing the advantages of the contract method of construction it may be said that they are these :

1. Plans and specifications are properly prepared in advance of the letting of the contract.
2. Great savings and better-designed structures are the results of careful planning.
3. An engineer's estimate of cost is made, in order that the reasonableness of the bid can be ascertained prior to making the contract.
4. The bidding system serves as a check against errors of the engineer in estimating, because there is no expert opinion in this country which costs so little to obtain as the expert opinion of the competing contractors who with their guaranteed bids are willing to back up their opinion of costs with their own cash.
5. Competitive bids are taken on a uniform basis, thereby assuring a minimum bid price.
6. The contract is awarded to the lowest responsible bidder and the owner gets the benefit of competition.

7. The successful bidder is required to give bond that he will perform the work in accordance with the plans for a definite cost and within a definite time.
8. The construction is carefully inspected ; thus assuring the owner of the quality of work contemplated by the contract.
9. The owner takes no chance. His representative—the engineer or architect—writes the specifications for what he wants, for when he wants it, for the price he is to pay, and gets just that.