Study Toward the Enlargement of Application of Technical Proposals and Negotiation Method

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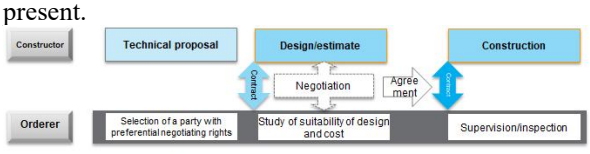
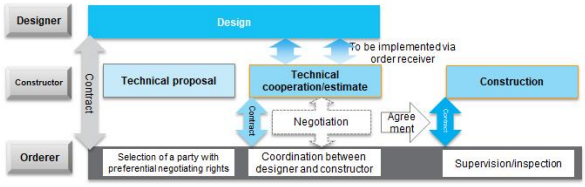
1. Introduction

With the enactment of the "Act on Promoting Quality Assurance in Public Works (Quality Assurance Act)" in 2005, the expansion of applications for the general competitive bidding/comprehensive evaluation method has been advanced, and the general competitive bidding/comprehensive evaluation method is being applied to most of the projects under the jurisdiction of the Ministry of Land, Infrastructure, Transport and Tourism. On the other hand, the amendment of the Quality Assurance Act in 2014 newly specified a "method by means of examination of technical proposals and negotiation on prices" (hereinafter called the "technical proposal/negotiation method") by which, in the case of works that involve difficulty in the finalization of specifications, it is possible to finalize the specifications and specify a target price through examination of technical proposals and negotiations on prices. With this method, process improvements and the effects of the utilization of technologies proposed by the contractor can be expected by incorporating the findings of the construction company from the design stage, and the 2 types shown in Fig.-1 are applied at present.



(a) Design negotiation/construction type



(b) Technical cooperation/construction type

Fig.-1 Contract type of the technical proposal/negotiation method

Using the comprehensive evaluation method, it is difficult to make a proposal accompanied by object changes and discussions, but by applying the technical proposal/negotiation method, it is possible to make a proposal by utilizing the original technology and know-how of the contractor. In addition, a detailed and optimum construction plan can be devised that takes into consideration the social conditions and site restrictions, thus enabling a design with high realizability and certainty. Additionally, selection of the optimum construction method can be made after having examined the cost-effectiveness and length of the construction period. It has been confirmed that this results in shortening the construction period and risk reduction during construction.

As of December 2024, a total of 42 cases of the technical proposal/negotiation method have been applied to the projects under the jurisdiction of the MLIT, but further grasping of problems and improvements are required in order to further expand this application.

In this paper, examples of the effects of specific application cases using the technical proposal/negotiation method will be presented, and then the problems that became evident in the process of interviewing, etc. and a policy for addressing such problems will be reported.

2. Grasping the problems encountered in the technical proposal/negotiation method and a policy for addressing those problems

As described above, various effects can be seen when applying the technical proposal/negotiation method, but there are also problems with the application and operation of the current system. Our Division has grasped problems through interviewing and questionnaires with customers who place an order as well as contractors. Fig.-2 shows the results the details. In response to these problems, it has been determined that the Operation Guidelines for the Technical Proposal/Negotiation Method in Projects under the Jurisdiction of the MLIT (hereinafter called the "Guidelines") shall be revised in 2 stages: short term and mid- to long-term. We have conducted a study of the following 3 points, which are mentioned to be short-term problems that can be addressed urgently. "① The effectiveness of the technical proposal/negotiation method may not be utilized in some cases," "② A large load before receiving an order," and "③ Response to change in the construction type that is not set in the requirements for engineers planned to be deployed."

① Study of response to GL revision (this time), ② Study of GL revision (mid- to long-term), ③ Response other than by GL, ④ Response is difficult

Classification	Minor classification	Main opinions	Response policy
Construction period/construction cost	Short technical cooperation period (design period)	- If the period of technical cooperation work is short, even in cases where it is assumed that an essential solution is possible when discussions with relevant persons are in order, there are cases in which the proposal must be withdrawn.	③ Response other than by GL
	Deviation between order receiving and placement parties on the technical cooperation work cost	- Although the contract amount of technical cooperation work is 5 million, the actual amount required is 10 times such contract amount.	② Study of GL revision (long-term)
	Judgment on the suitability of estimate prices is difficult	- A concept of the suitability of an estimate by one company is desired. (orderer) - There was a great deviation between the reference amount and the estimate amount of the constructor. (orderer) - There is a possibility that the proposed specifications have been adopted as they are, without performing a screening of the technical proposal. (orderer)	② Study of GL revision (long-term)
	About the width of the arrangement of estimated construction cost in the tender explanation document	- Due to the possibility of the construction contract amount being changed greatly through investigation and studies, and in order to urge better proposals by participants, the description of the estimated construction cost in the tender explanation documents should have a certain range of width.	④ Response is difficult
How to proceed with work sharing, etc.	Appropriate response to change	- In the contract document, matters to be changed are specified in Articles 18, 19, and 20, but it is difficult to change the matters due to the standpoint of the party with preferential negotiating rights.	③ Response other than by GL
	Risk sharing (concept of change in contract amount)	- Risk sharing (orderer, designer, and the party with preferential negotiating rights) should clearly be defined.	② Study of GL revision (long-term)
Revision of Guidelines (this time) / Load, etc. of order receiving and placement procedures	The effectiveness of the technical proposal/negotiation method may not be utilized in some cases.	- Toward the enlargement of utilization of the technical proposal/negotiation method, the details of the applicable works suited to ECI should be indicated. - Discussions among relevant organizations are not sufficiently in order, and the advances of the technical proposal/negotiation method are not fully utilized.	① Study of response to GL revision (this time)
	Large load before order receiving	- The range of the subjects of technical proposal evaluation should be narrowed. - The setting of the subjects of technical proposal that require both a shortening of the construction period and a reduction of the construction cost should be discontinued.	① Study of response to GL revision (this time)
	Response to change in construction type not set in the requirements for engineers planned to be deployed	- The handling of cases should be clearly defined, in which the requirements for engineers planned to be deployed are not met that were set at the time of public announcement, due to a change in the construction method, etc. during the design period.	① Study of response to GL revision (this time)
	Large load in order placement procedure	- There is a burden of the procedures for starting specialty subcommittees and various deliberations and preparations.	② Study of GL revision (long-term)
	Technical proposal submittal period	- Regarding a proposal in which structural change can be made, structural calculation is required, and so the period from public announcement to the submittal of a technical proposal should be 2 months or more. - Regarding the volume of a technical proposal document, a guide should be shown as an example, and the number of proposals per subject and the number of sheets of the document should be reduced.	② Study of GL revision (long-term)
	Burden regarding reference amount	- Re-submittal of a technical proposal and an estimate based on the reference amount should be deleted, because it puts a great burden in terms of both aspects of work and period. - The reference amount was calculated based on the construction cost of the downbound line, but the reference amount was small, without a correction of two days off per week and a rebate of the successful bid rate . (orderer) - The basis for the setting of the reference amount was unknown. (constructor)	② Study of GL revision (long-term)
	About duplication of evaluation items	- The details described in individual problems are likely to be duplicated with the description of the degree of understanding, and if the required details are different, it should be clearly stated to that effect.	② Study of GL revision (long-term)
	Period until notification of the creation of design documents for technical cooperation work	It appears that the period from the notification of the selection of preferential negotiating rights to the creation of design documents for technical cooperation work differs with the works, but the rough period should be clearly indicated as a guide. In the properties we worked on, the work started with the design conditions remaining unfinalized, the period of around one month was insufficient.	② Study of GL revision (long-term)
	Publicizing of material required for the creation of a technical proposal document	The material required for the creation of a technical proposal document should be publicized at an early stage. (Clear indication of the publicizing period)	③ Response other than by GL
	About the improvement of a technical proposal	- An improvement proposal document should be capable of being submitted without fail after interviewing. (A better proposal can be made by checking the difference in concept between the order receiver and the orderer.)	③ Response other than by GL
	Clarification of the public announcement period	The period for public announcement should be clearly indicated.	③ Response other than by GL

Fig.-2 Policy for addressing the major problems of the technical proposal/negotiation method

As the background of the opinion that "① The effectiveness of the technical proposal/negotiation method may not be utilized in some cases," there may be cases where there will be an influence of the projects in surrounding areas and various types of insufficient coordination resulting in suspension of project, a delay in the construction period, and re-examination of the construction method. In that case, the advantages of the technical proposal/negotiation method cannot be utilized. Therefore, when applying the technical proposal/negotiation method to the Guidelines, precautions have been clearly stated, and cases of applicable projects such as bridge repair which in recent years the application of the method has been expanded. We anticipate that this will lead to support for the person in charge of the practical work of order placement, and aid the expansion of application of the technical proposal/negotiation method.

As for the background concerning "② A large load before receiving an order," there also was an opinion such that the load on the participants in competition was great, due to the setting of contradicting technical proposal subjects of a shortening of the construction period and a reduction of the construction cost as well as the setting of technical proposal subjects that have a wide range of the matters to be examined, as the proposal subjects required by the orderer during the section of technical cooperation work. Therefore, precautions so that the range of technical proposals required will not be too wide, not requiring a shortening of the construction period and a reduction of the construction cost simultaneously, and others have been clearly stated.

As for the background concerning "③ Response to change in the construction type that is not set in the requirements for engineers planned to be deployed," in the works to which the technical proposal/negotiation method is applied, there were cases in which the details of construction were changed to those of a construction method that was different from the experiences of construction required for the engineers that were planned to be deployed at first, as a result of a study of design during the design work period. Therefore, as response to be taken hereafter, the experiences required for the engineers that are planned to be deployed shall be set based on the possibility of change after the technical cooperation work, and it has been determined that the Guidelines shall clearly state that, if a construction method has been adopted, which is different from that involving the experiences required for the engineers that are planned to be deployed in the stage of technical cooperation work, and the engineers that have been deployed do not have experiences in such construction method, it shall be described in the public announcement material, requiring that engineers having the experiences in such construction method should be deployed as substitutes, or such engineers should be deployed separately.

These details as mentioned above had been reflected in the revision of the Guidelines in February 2025.

3. Conclusion

The technical proposal/negotiation method is an effective technique in construction in which the findings of the constructor should be utilized, but there also are problems stated above, and we are seeking improvements as appropriate, in cooperation with the MLIT, etc.

A follow-up for the system of the technical proposal/negotiation method will be implemented continually, in order to make improvements in the problems that have been determined to be studied continually, and at the same time support, etc. for each of the order placing organizations will also be provided continually.

☞For more detailed information, refer to:はこちら

1) FY 2024 Discussion meeting concerning how the construction production and management system ought to be in future in order to fulfill the responsibility of an orderer (FY 2024 Construction Production and Management System Subcommittee 1st meeting (June 25, 2024))