

Study on how to expand the application of business promotion PPP

(Research period: FY 2021 -)

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Key words: project promotion PPP, guidelines, project supervision work, management, public private partnership

1. Introduction

The project promotion PPP is to implement efficient project management by merging varied knowledge and abundant experience of engineers from both public and private sectors from the upstream stages of the project such as survey and design (Fig. 1). We introduced the project promotion PPP in FY 2012 after the 2011 off the Pacific coast of Tohoku Earthquake in March 2011. The purpose was to smoothly and speedily implement the project that extended over about 380 km such as the Sanriku Coast Expressway, the Tohoku Regional Development Bureau. Later on in March 2019 the Guidelines for the Project Promotion PPP were established under the Jurisdiction of the Ministry of Land, Infrastructure, Transport and Tourism (hereinafter called the "Guidelines") and the application of the guidelines has been widened to projects for recovery from large-scale disasters as well as large-scale projects in ordinary times in each of the regional development bureaus.

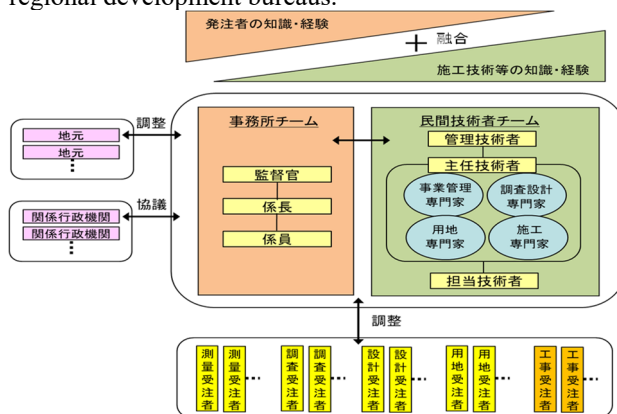


Fig. 1: Overview of the project promotion PPP

In addition, the project promotion PPP has various stages of work such as survey, design, land, and construction. It is necessary to secure and educate personnel who have capabilities required for the project management work to obtain high quality work results. Also, since there are varied needs of utilization depending on the purpose of introduction of the project promotion PPP and each project stage, it is necessary to revise the Guidelines to address such needs, in order to expand the application of project promotion PPP.

Under such background, the NILIM held hearings and

conducted questionnaire surveys about the project promotion PPP work ordered by each of the regional development bureaus, etc., as surveys of the situation of implementation of the project promotion PPP management work. Based on the results of those surveys, the NILIM conducted a study to consider revisions to the Guidelines. This paper reports the results of the surveys and the contents of the study.

2. Survey results

Of the project promotion PPP work ordered by each of the regional development bureaus, concerning the projects on which hearings were held by the NILIM, the contents of implementation, systems, etc. of such projects have been summarized as shown in Fig. 2.

対象業務	指導・調整、協議の有無		事業段階			実施体制		
	業務の指導・調整	地元・関係機関協議	調査設計	用地	施工	管理技術者	主任技術者	担当技術者
PPP ①	—	●	●	●	—	○	—	○
PPP ②	●	●	●	●	●	○	○	△
PPP ③	●	●	●	●	—	○	○	△
PPP ④	●	●	●	●	—	○	○	—
PPP ⑤	—	●	●	—	—	○	—	○
PPP ⑥	●	●	●	—	—	○	○	—
PPP ⑦	●	●	●	●	—	○	○	—
PPP ⑧	●	●	●	—	—	○	○	—
PPP ⑨	●	●	●	●	—	○	○	○
PPP ⑩	●	●	●	●	—	○	○	—

凡例 ●:実施 ○:資格・実績要件有 ○:資格要件無・実績要件有
○':資格要件有・実績要件無 △:必要に応じて資格・実績要件有

Fig. 2: Summary of the implementation system, etc. of the project promotion PPP work

Regarding the project promotion PPP, a type such as PPP (ii) is set in the Guidelines, which is intended for all the project stages from survey to construction, but it was often utilized in each individual project stage. Also, as to the engineers in charge, the Guidelines specify a system of 3 layers: managing engineer, chief engineer, and engineer in charge. However, when the system was utilized in each individual project stage, a system of 2 layers was employed.

In addition, the results of the questionnaire surveys, showed that the parties placing and receiving orders expressed the following opinions and requested improvements.

- If work such as the project promotion PPP is performed for both maintenance and management, it will solve the personnel shortage problem.
- Engineers will be needed who understand the both intention and that policy of the party placing the order and who can smoothly collaborate with the

party placing the order.

With regards to the second point, many people's opinions stated that among the roles of the managing engineer, chief engineer, and engineer in charge, when it comes to project promotion PPP, the managing engineer is required to have a wide field of vision and leadership. Many opinions stated that the chief engineer is required to have both expertise as well as the wideness of the range of response, communication skills, and that the engineer in charge should have the ability to understand and coordinate skills.

Based on these opinions, we have conducted a study of the contents of the proposal to revise the Guidelines and summarized them as described below.

3. Drafts of the revised contents

On the basis of the above surveys, we have conducted a study of the revision drafts of the Guidelines. The two major revision drafts are described below.

- (1) Addressing the varied project stages and classification, etc. according to the purpose (Fig. 3)

The project promotion PPP must be capable of being selected and set in each of the stages of the project, according to the phase in which it is introduced and the purpose, contents, etc. of the work. Therefore, in addition to the type (comprehensive type) of all applicable project stages from survey to construction that have already been decided on, the project stage selection type has been chosen.

区分		指導・調整・協議の有無		事業段階						体制 (資格・専任・常駐)		
		業務の指導・調整	地元・関係機関協議	調査	設計	用地	施工	維持管理	管理技術者	主任技術者	担当技術者	
事業促進 PPP (災害時)	総合型	●	●	●	●	●	●	○	○	○	△	
	事業段階選択型 (複数段階、単独段階)	●	●	各課題に応じ、複数または単独段階で適切に選択				○	○	○	△	2or3 段階
事業促進 PPP (平時)	総合型	●	●	●	●	●	●	○	○	○	△	
	事業段階選択型 (複数段階、単独段階)	●	●	各課題に応じ、複数または単独段階で適切に選択(管理も含む)				○	○	○	△	2or3 段階

凡例 ●:実施 ○:資格・実績要件有 ○:資格要件無・実績要件有 △:必要に応じて資格・実績要件有
○...常駐・専任の必要あり ○...必要に応じ常駐・専任を設定
※業務の特性、規模、難易度等を勘案し、業務体制の選定を行っていくことが考えられる

Fig. 3: Systematic summary of the Guidelines

Also, in recent years, the amount of work such as inspection and diagnosis as well as repair work, has been increasing in the stage of maintenance and management, and it is required that the work be performed more efficiently. For this reason, when placing orders at ordinary times, the item in the stage of maintenance and management has been added, in consideration of the expansion of the application of the project promotion PPP to the stage of maintenance and management.

Regarding the engineer who has been scheduled to be deployed, they must be the comprehensive type and their deployment will be in 3 layers. The engineers who are scheduled to be deployed for the project stage selection type shall be of 2 layers or more. In addition, regarding the selection of the engineers planned to be deployed in the case of 2 layers, it has been enabled to set the selection according to the characteristics, scale, degree of difficulty, etc. of the

work.

- (2) Clarification of the capabilities required of the engineers to be deployed

In order to ensure that the project promotion PPP work will be implemented, it is of vital importance that a common understanding is shared about the capabilities of each layer of the party receiving the order as required by the party placing the order and about the personnel fit for deployment in each layer as considered by the party wishing to participate in the tender. Based on the replies, obtained in the hearing surveys, the required roles have been summarized in Fig. 4 according to the class of engineers.

管理技術者	主任技術者	担当技術者
■事業全体の俯瞰 ・事業全体計画を俯瞰し、個々の業務・工事の目的や内容を理解し、主任・担当技術者が的確に業務を行えるよう指導する。	■事業全体の流れの把握 ・事業全体の流れ、個々の業務・工事の目的や内容を理解し、管理技術者の指導を踏まえ、的確に業務を行う、又は、担当技術者を指導する。	■目的に応じた遂行 ・管理・主任技術者の指導を踏まえ、目的に応じて、的確に業務を行う。
■必要な手続等の理解 ・業務遂行にあたり、必要な行政手続、協議等の流れ、目的、内容を理解し、主任・担当技術者を指導する。	■必要な手続等の理解・遂行 ・管理技術者の指導を踏まえ、必要な手続、協議の目的や内容を理解し、的確に手続、協議等を行う、又は、担当技術者を指導する。	■必要な手続等の遂行 ・管理・主任技術者の指導を踏まえ、目的に応じて、的確に手続、協議等を行う。
■信頼関係の構築 ・事業の関係を想定し、関係者と信頼関係を構築しながら、行動するとともに、主任・担当技術者を指導する。	■信頼関係の構築 ・管理技術者の指導を踏まえ、事業の関係者と信頼関係を構築できるように、業務を行うとともに、担当技術者を指導する。	■協調的な行動 ・管理・主任技術者の指導を踏まえ、事業の関係者と信頼関係を構築できるように、協調的に行動する。
■柔軟性のある行動 ・基準やマニュアルだけでは解決できない関係者の意見を聞きながら、計画へ反映できるように、柔軟に行動するとともに、主任・担当技術者を指導する。	■柔軟性のある行動 ・管理技術者の指導を踏まえ、基準やマニュアルだけでは解決できない関係者の意見を聞きながら、柔軟に計画に反映するとともに、担当技術者を指導する。	■協調的な行動 ・管理・主任技術者の指導を踏まえ、関係者の意見が計画に反映されるよう、協調的に行動する。

Fig. 4: Capabilities required of the engineers to be deployed

4. Conclusion

The above results of the study have been reflected in the Guidelines, after deliberation in the Council of Experts of the MLIT. As a result of the incorporation of the results of the study that have been indicated herein, it is expected that the project promotion PPP work will be carried out more smoothly by utilizing the project promotion PPP in a wide variety of projects, and that both the parties placing and receiving orders will share a common understanding. In the future, we plan to carry out follow-up work to review the situation of implementation of project promotion PPP, its effects, problems, etc.

☞ For detailed information, refer to the following:

- 1) Study on the systematization of various types of management work and ability evaluation of the project promotion PPP, etc. (Proceedings of the 40th Research Presentation and Discussion Meeting on Construction Management)

<https://www.nilim.go.jp/lab/peg/img/file2006.pdf>

- 2) Basic survey on the classification of the work of management and ability evaluation of the project promotion PPP, etc. (Civil Engineering Journal, Vol. 64 No. 9)

<https://www.nilim.go.jp/lab/peg/img/file1995.pdf>