

Analysis of Design and Build Contract on Residential Building Projects in South Tangerang

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ABSTRACT: The problem in this study aims to identify design and build contract method for residential building project in South Tangerang. Researcher will examine perceptions of design and build service provider such as consultant in South Tangerang, especially for residential building projects. And also reviewing the perception of its clients of the results obtained from the design of a residence that uses a design and build contract. The next step is exploring perceptions from the professional association (IAI) *Ikatan Arsitek Indonesia*, Banten province in addressing the phenomenon of design and build practices especially after the official enactment of the Architect Law (UU Arsitek) by the government. This study will analyze several literature studies and relevant research results, including design and build contract theory and design and build contract theory on residential building projects. The method used in this research is qualitative methods. From the results of this study will be recommended an initial study that is useful to be able to provide input to relevant professional associations. In order to clarifying the rules and contract regulation design and build for the perpetrators of residential construction project services in Indonesia.

KEYWORDS: design and build, contract, residential building, South Tangerang.

I. INTRODUCTION

Just as the Indonesian people in dealing with the practice of the construction field often use the terms of design and build, but with the wrong definition and understanding. Design and build contract have been around for a long time and have been legalized in several countries. AIA (American Institute of Architect) already has clear and precise documents for designing and build contract, but that is all for projects with great difficulty. If to build a house, we must use a simpler design and build contract. Meanwhile the Indonesian Architects Association (IAI) has not yet regulated the design and build including contracts and their implementation. The main problem is the misunderstanding to interpret the sentence of Design-Build that previously was also known as D & C (Design and Construct). The simplest meaning of design and build is a collaboration package between designer (architect) and builder (contractor). What often happens in the practice field is that I am a designer as well as a contractor, this is wrong meaning. What is allowed in association like AIA, RIBA etc is that I am a designer and I work together to produce a submission package with the contractor. I am the architect and also a contractor is not accommodated by the IAI, considering that it will cause a conflict of interest. Architects in the preamble of *The Working Relations Guidelines book, between Architects and Users of Services* published by IAI, among others, it is mentioned as a trusted expert in assisting and representing service users. Then what is the perception of IAI if an architect / consultant in Indonesia does not only have the competence to design a house but also build it? Will it be contrary to professional ethics? Considering that in the design and build contract it turns out that each service provider has different duties, authorities and responsibilities even though the end goal is the same, namely to realize the work and bring civilization.

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Design-Build Contract Relationships

Diagram explain contractual relationships for the AIA Design-Build Family.

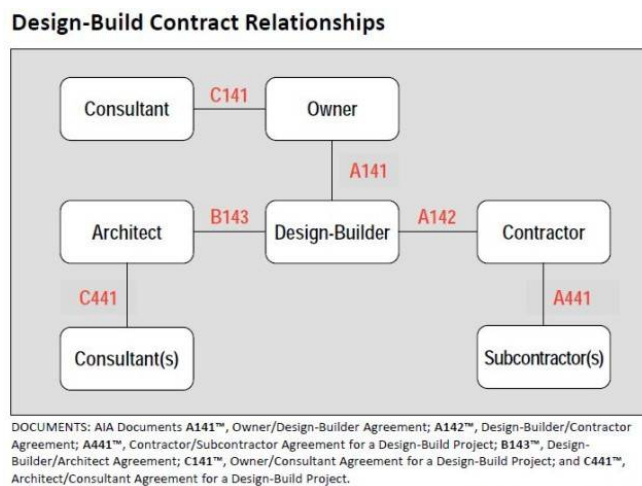


Fig 1 : D-B Contract Relationships by American Institute of Architect (AIA)

II. THEORETICAL REVIEW

2.1 Design and Build Contract

More about the definition of design and build obtained from various sources, but specifically design and build can be defined as “A Team based project delivery system organized to provide efficient design and construction processes, where the owner contracts with single entity to provide design and construction as a whole service ”(Kevin J. Potter, 1994). A procurement system with one contract between the project owner with a construction implementation team (design builder / design build contractor) that is responsible for carrying out the design and construction process efficiently. Design and build is simpler in the process, when compared to traditional methods called design-bid-build, where the design and implementation process of construction is clearly separated by a work contract. Design and build contract is all work related to the implementation of building construction, where the planning work is integrated with the building construction. Work contract relationships in designs are that the owner appoints directly to the executor of the design and build work, where they overall do the design work while carrying out the construction work.

In a design and build, the owner only deals with one single contract and one responsibility. Architects or designers and contractors work together from the beginning of the project as a team and provide integrated services to the owner so that the project can be completed on schedule and in accordance within budget. Strong collaboration between architects and contractors, can minimize technical errors during the field. According to Gwen (1998), design and build is recognized as beneficial for all parties such as clients, architects, engineers, and contractors.

2.2 Design and Build Contract on Residential Building Projects

If you hear the term project management, it will focus on large-scale projects. This is not entirely wrong, because in reality the system is more widely applied to large-scale projects, with large contractors that has legal entities. For government projects, it is clear to implement the system, because there are laws that regulate it. Then what about in the housing construction project, which is usually a small contract value and not a few that the contractor is an individual/small scales, and also they have not a legal entity. In some projects the implementation of work in a residential project is less supported by the implementation of a project management system which is actually very

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useful, both for the contractor itself, and of course for the owner. Some of them are not even supported by adequate documentation, both contracts, work drawings and reporting of work progress.

In the design and build contract that is also part of the project management system, there are arrangements for contractual relations between the construction industry players, especially in residential building projects. Where usually the owner has a contract with one business entity, or one joint venture (designer & contractor) who is responsible for completing the project from start to finish, it comprises planning, designing, and constructing. This method becomes more efficient in terms of time and cost compared to the old way (design-bid-build). There are several benefits to the design and build contract for residential buildings, one of which is: direct communication between the owner and the design and build team so as to minimize misperceptions between the two parties in designing and building a house, clear construction costs at the beginning because using a fixed price or lump sum cost, so as to prevent the overhead costs in the future, it can minimize technical errors in the field during the project.

Meanwhile in the United States there is the term Architect led-design and build, ie architects / consultants are responsible and coordinate on all aspects of construction project work, from the initial stage, planning, construction work, to the handover of work. However from all advantages of design and build residential projects, there are certain disadvantages that occurs in the practices.

The Advantages and Disadvantages

This table shown all aspects that related to the advantages and disadvantages of D-B Contract.

ADVANTAGES	DISADVANTAGES
Constructability: Design and construction activities are well integrated and the constructability of the project is well developed	Claim Management: If the client wishes to make changes in the design issues, after the building contract is determined and signed, he/she has to pay more fees. This situation leads to claim management.
Shorten Duration: With a consolidated design and construction team, the implementation of fast-track construction is straightforward. Overlapping of different phases in the project process saves time.	Ongoing Design Activities: This system can cause delay of construction to complete the design phase. Design phase continues during the project process.
Single Point Responsibility: There is a single point of contact and contract responsibility during the whole project performance rather than the separation in the activities of design professional and contractor.	Leadership: In design-build, the contractor or the design professional takes the overall project leadership. Most commonly, the contractor is selected as the leader. Therefore, the design professional has no direct contractual relationship with the client.
Efficient Communication: As a result of single point of responsibility, there is efficient communication flow between design and construction team members.	Design Quality: The indirect relationship of the design team can limit the control activities of the client on the design issues.
Reduce Cost: Transfer of monitoring activities and risks to the company can reduce construction engineering costs	Forecast Budget: Pricing can't be done at the early phase.
Reduce Claims: Monitoring the project activities is well-controlled in this system as a result of design team's active position from	

Fig 2: Advantages and Disadvantages of Design and Build Residential Projects (Sanvido, 1997)

III. RESEARCH METHODOLOGY

3.1 Research Process

The research process is carried out with qualitative methods. Qualitative research to uncover holistic-contextual symptoms becomes a collection of data from natural settings by utilizing researchers as key instruments. Qualitative research is descriptive, tends to use analysis with an inductive approach, the process and meaning (subject perspective) are more highlighted.

The next step, the researcher went directly to the field to do correspondence interviews from experts (research subjects). The first is researcher will interview the principal of PT. Genco Global Consultant, a design and build consultant office based in BSD South Tangerang, Banten and its clients. The second is researcher will interview the key person of the organizational board of IAI (*Ikatan Arsitek Indonesia*) Banten, Province.

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3.2. Research Subject

The problem in this study aims to analyze the design and build contract method on residential buildings in South Tangerang, as well as the factors that influence such as how professional architect association (*Ikatan Arsitek Indonesia, Banten*) perception of design & build practices and also the advantages and disadvantages of contract design & build on residential building projects. Then the researcher made several interview questions, related to these factors aimed at experts in order to collect data and input :

1) Consultant provider of design and build services (PT. Genco Global Consultant):

- How is the quality of the actual design that is produced in a residential building project in the South Tangerang area, which uses a design and build contract
- How do you adjust the overlap between the design process, drawing work and construction?
- How to regulate the relationship and coordination between the design team and the contractor during the field?
- What if there is a design change by the client after the contract is signed and the project progresses, will it affect the additional costs? As we know the design and build payment contract uses a lump sum or fixed price contract.
- And what are the responses from clients regarding the final results of the residential project of your company?

2) The board of organization of IAI (*Ikatan Arsitek Indonesia*) Banten:

- What is the view of IAI regarding the design and build contract?
- Is it legal if an architect practices design and build? And is it violating the professional code of ethics?
- What is the position of the architects in the future who carry out design and build practices, especially in residential building projects, after the passage of the Architect Law?

IV. CONCLUSION

This research journal is the first phase of a whole researchs, after all interview questions are answered by the research subject, the data obtained will be further analyzed for the second phase of the research. Where in the second phase of the study the researcher will be able to conclude the analysis in more depth and is also expected to provide preliminary recommendations for the procedures for the continuation of the practice of design and build contracts more clearly, especially for professional architect association in Indonesia (*Ikatan Arsitek Indonesia*).

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