Tacoma Narrows Bridge Case Study Analysis

The Design/Build Contract

The design-built agreement between the Washington State Department of Transportation (WSDOT) and the Tacoma Narrows Constructors (TNC) was signed on July 16, 2002, and it resulted in the emergence of a contract award and procurement environment. A section of the agreement's terms provided that besides designing and constructing the bridge, TNC was also required to upgrade the existing bridge and infrastructure for $849 million "firm fixed price" (FFP). It is important to note that this deal was a deviation from the conventional design-bid-build type of agreement, where a seller only implements the buyer's project design plan. In this recent design-built contract between the WSDOT and the TNC, it was stated that the bridge part of the project was estimated to cost $615 million. It was further documented that the design of the bridge and other related services were to be offered by the TNC selected Parsons Corporation. The contract provided an initial schedule for the project, in which the parties agreed that the construction of the bridge would be completed in a record time of fifty-five months. Notably, the parties to this contract mutually agreed that the building of the bridge caissons was to commence seventeen weeks after the contract came into force.

The 'open forum' nature of the design discussions allowed the TNC to start the fabrication of the steel cutting edge for the key tower caissons within thirty days after the signing of the contract (Irwin, Stoyanoff, Xie, & Hunter, 2005; Viola & Spoth, 2007). A critical assessment of this contract reveals that it was attracting subcontractors and contractors from different parts of the world, including South Korea, the United States, and Japan. Another important element of the contract between the TNC and the WSDOT was that the TNC was required to provide for all the materials, tools, labor, machinery and construction equipment, transportation, utilities, heat, transportation, and other services and facilities crucial for the effective implementation and completion of the project. Additionally, this new type of construction agreement also stipulated that the TNC was entirely responsible for acquiring the relevant regulatory approvals, permits, and insurance coverage. In brief, the contract between the WSDOT and TNC can be described as a peculiar construction agreement, with features that depart from the traditional construction/building contracts. For instance, the TNC undertook the responsibility of settling the cost of all the inputs that were required for the successful completion of the project, and this feature of the contract was fundamentally beneficial to the buyer, in this case, WSDOT. Nonetheless, this contract specification was at the same time a continuous challenge for TNC. The agreement, for example, provided that TNC was to complete the project by April 2, 2007. In addition, the company agreed to upgrade the old bridge within eleven months. It is interesting to note that this contract stipulated that the liquidated damages for the project were to be tired, but this was dependent on the exceeded milestones, which, eventually, had cost implications on the part of TNC. Originally, it was estimated that the whole construction cost would be 760 million; however, on completion of the project, the total cost incurred stood at $722 million. Basically, this meant that the project's savings was $38 million (Spoth, Whisler, & Moore, 2008).

Lessons Learned (Summary of Project Assessment and Analysis)

An in-depth analysis of the Third Tacoma Narrows Bridge reveals that the parties to this contract employed a novel project management strategy that enabled them to complete the construction of the bridge successfully. The contractual agreement between the WSDOT and TNC provided the much-needed flexibility in the procurement of the necessary resources. It is worth noting that under the contract, TNC was responsible for covering all the project's costs and it became a critical advantage for WSDOT. The construction of the bridge was a huge success resulting in substantial cost savings. One lesson that can be learned from the case is that in a construction project, the buyer should consider negotiating for a contract that obliges the seller to take the responsibility for all the costs, including labor and materials. The significance of this approach is that in the long-term, the buyer is likely to make substantial savings of the project's cost.