

# Performance Bond Strategies for Project Owners



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*By Caitlin Ghoshal and Ken Beehler, WSP USA*

## Introduction

There are several critical steps during procurement and project delivery integral to achieving a successful capital project. For projects delivered under alternative delivery, such as public-private partnerships (P3s) and design-build, performance security requirements are one method project owners use to further the goal of successful project completion. Performance security requirements demonstrate to project owners that contractors are financially solvent and these ensure project completion if the selected contractor is unable to perform.

Project owners typically require a performance bond that covers 100 percent of the value of the contract in the event the contractor cannot finish the project. There is concern that in a crowded surety market, with contractors using their bonding capacity to its fullest, and contractors unable to obtain performance security in an amount matching the contract value of sizeable projects, onerous bonding requirements may limit competition by reducing the number of proposers, ultimately undermining the bidding process. A performance bond requirement less than 100 percent may therefore be an option to attract additional qualified proposers in the interest of ensuring a competitive procurement. However, reducing the performance bond coverage requires project owners to accept a greater risk associated with a contractor's default. Ultimately, a project owner must consider the trade-off between this risk and the increased competition in determining whether this is a viable option.

This paper describes the role of performance bonds in complex alternative delivery projects and discusses reasons why project owners may – or may not – require a partial performance bond that covers less than 100 percent of the contract value. While liquidity is necessary to cover near-term project loss and typically comprises the performance security structure, this paper does not include a discussion of short-term guarantees. This paper focuses exclusively on performance bonds for surface transportation projects and includes examples of both P3 and design-build projects. The paper concludes with strategies that project owners may use to design the performance security package best suited for their project.

# Forms of Performance Security Requirements

Contract performance security protects project owners in the event a contractor fails to complete a project, whether because the contractor does not construct the project as agreed or becomes financially insolvent and stops construction. A surety writes a bond through a tri-partite agreement between the surety, project owner and contractor. When a contractor defaults, the owner can assert a claim against either the principal on the bond – the contractor – or against the surety.

There are several types of bonds that a surety may issue for a single project, including payment bonds, performance bonds, bid bonds, maintenance bonds, supply bonds and subcontractor bonds. If a contractor fails to perform its obligations, the surety's role is to fulfill the duties of the contractor. Generally, a surety may do so by hiring replacement contractors, rebidding the project on behalf of the project owner, providing technical or financial support, funding the defaulting contractor through to completion, or paying the bond to the project owner so that the owner can procure a new contractor. These actions could be too cost-prohibitive to a project owner in the public sector if the surety is not in place.

In addition to their function during project delivery, performance surety bonds can also be an important prequalification tool. Before issuing a performance bond to a contractor, surety underwriters examine a contractor's financials, evaluating the firm's solvency, cash flow, tax returns, debts and liquidity. The underwriting process prior to issuing a bond provides a means of assurance that a contractor will not be prevented from successfully completing the project due to cash flow issues or insolvency. In effect, the project owner relies on the private surety underwriter to evaluate the contractor's financial and commercial standing, relieving the owner of conducting an onerous investigation on its own during procurement.

Performance bonds are typically charged a rate per \$1,000 of contract amount and rates generally decline as the project size increases.<sup>1</sup> While there is no set rule and the price may vary from case to case, contract surety bonds typically cost between 0.5 percent and two percent of the contract value if the project's cost is greater than \$100 million. The cost of an individual bond, however, is heavily dependent on actuarial analysis with a primary emphasis on the creditworthiness and financial assets of the contractor. Surety underwriters review dimensions that would affect a contractor's performance and the likelihood that the surety

would assume a contractor's obligations to the project owner. Sureties are essentially underwriting a project's risks, and the underwriting process is designed to assess and minimize the likelihood of experiencing a loss. The rigorous nature of surety underwriting helps project owners understand the financial capability of proposing contractors based on their ability to meet bonding requirements.

## I. Laws Governing Performance Bonds

The Miller Act, 40 U.S.C. §§ 3131-3134, sets forth bonding requirements for federal projects. "Little Miller Acts" at the state level serve the same purpose as a baseline requirement for bonding on state public works projects. Accordingly, when analyzing a partial performance bond as an option, project owners should consult the relevant state law governing bonding requirements. Several states require that performance bonds cover 100 percent of the contract value for a project, while others are more permissive, granting the project owner discretion in setting the bonding requirements.

Notably, for highway projects that are funded by the Federal Highway Administration (FHWA) and therefore subject to FHWA regulations, FHWA does not specify the amount of a performance bond or when or how performance bonds must be used on projects receiving federal funding administered by FHWA. 23 C.F.R. § 635.110(f). Rather, on federally-funded highway projects, FHWA defers to state and local policy on bonding requirements, with the exception that a state may not impose a bonding requirement that, in FHWA's judgment, operates to restrict competition. 23 C.F.R. § 635.110(b). Notably, however, while FHWA does not impose a minimum performance bond requirement, FHWA does discourage excessive bonding requirements that reduce competition and unnecessarily increase the cost of the project.<sup>2</sup>

## II. Reasons for Reduced Performance Bond Requirements

While many states have traditionally required surety bonds to cover 100 percent of the contract value for large infrastructure projects, states with flexibility to deviate have started to do so. The primary reason project owners may reduce the amount of required bonding coverage is to encourage competition during the procurement process. Higher performance bond requirements may lead to fewer bidders because only a few contractors will be large enough and have sufficient bonding capacity to obtain a surety bond in the amount necessary to cover 100 percent of a project's value.

Project owners reduce bonding coverage by requiring a "partial bond" instead of the full 100 percent bond. A partial bond covers either a percentage of the full contract value or provides

<sup>1</sup> Kraft, Elizabeth, Heedae Park, and Douglas Grasberg. "Performance Bond: Cost, Benefit, and Paradox for the Public Highway Agencies." Transportation Research Board, 2013. Retrieved on November 1, 2018: [http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1110&context=ccee\\_pubs](http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1110&context=ccee_pubs)

<sup>2</sup> Federal Highway Administration. "Performance-Based Contractor Prequalification as an Alternative to Performance Bonds." Publication Number FHWA-HRT-14-0345, August 2014. Retrieved on November 1, 2018: <https://www.fhwa.dot.gov/publications/research/infrastructure/14034/14034.pdf>

coverage for a specified maximum sum (e.g., \$100 million) that is less than the full contract value. The effect of a “partial bond” is a reduction in the “penal sum,” which is the maximum amount for which the surety is liable on the bond. That is, the penal sum represents the most that the surety will pay out to complete the job, or the amount the surety will pay to the owner to buy out its obligations under the bond.

Theoretically, reducing the bonding requirement from 100 percent means that more contractors may be capable of bidding on a project with a high contract value because 1) a greater number of contractors have the bonding capacity to bid; 2) the amount bonded does not tie up a contractor's bonding ability, incentivizing contractors to bid in the first instance, and 3) a lower bond requirement allows a greater number of sureties to write the bond and leaves additional capacity in the surety market for other projects.

Accordingly, requiring a partial performance bond may reduce the chance that otherwise qualified contractors are precluded from bidding simply because they cannot meet the contractual bonding requirement, whether because they are not large enough or, for large firms, because their bonding capacity is tied up on other projects. When this is the case, the result could be that competition is reduced by precluding smaller or newer firms altogether or by incentivizing joint ventures that reduce the overall number of competing entities.

Notably, the cost of a surety bond is unlikely to factor into the evaluation of whether to require a 100 percent performance bond for a large-scale design-build project. The prevailing practice in the surety industry is to price a bond based on the full contract value, regardless of whether the bond covers 100 percent of that value or a reduced portion thereof. Sureties typically do so because they evaluate the maximum possible loss on a given project, which equates to 100 percent of the contract value, even though the surety may not be liable for the full amount. Moreover, for a project of significant size and scope, the cost of a surety bond is a small portion of the overall project cost. Incremental savings on bonding costs, assuming this were possible, would be insignificant against the assumption of risk from reducing the bond.

### **III. Reasons for 100 Percent Performance Bonding**

One-hundred percent performance bond requirements offer clear advantages to project owners, and have historically been the default amount required on design-bid-build projects. The greatest advantage of a 100 percent performance bond is that the surety will almost always cover the entire remaining cost to complete the project if the contractor defaults before the project is completed. As such, the 100 percent performance bond provides the owner with a measure of cost certainty and reassurance that the project will be completed, resulting in a lower contingency to cover the risk of contractor default.

Additionally, a 100 percent performance bond gives project owners a sense of a contractor's likelihood of default, financial resources and strength of previous project performance.

A large, complex project naturally requires a contractor with the capability to execute the project, and 100 percent performance bonding requirements set a high minimum threshold for financial solvency and performance. A surety underwriting a 100 percent performance bond provides an extra level of evaluation that essentially prequalifies bidders with proven financial solvency and a track record of success. When the owner conducts its evaluation of proposals submitted in response to the Request for Proposal, the owner is evaluating contractors that the surety industry has evaluated, reducing the likelihood of a proposer winning the project due to its proposal writing rather than adequate liquidity and a history of proven success.

### **IV. Considerations for Reducing the Bonding Amount**

The principal downside of increasing competition by reducing bonding requirements is the transfer of some of risk of the contractor's default to the owner. In the event of a contractor default before completion of the project, the owner can rely on the surety only for the amount it is liable to cover. The owner, should it desire to continue with the project, must cover the difference between the amount of the performance bond and the cost to finish the project.

The transition to a new contractor entails substantial costs. A new contractor must pick up where the first left off, including a full review of the design progress and the establishment of a new construction plan. This process can be exacerbated by the fact that a contractor that is forced into default is likely to have faced troubles while its work was under way, whether financial or with its means and methods of construction. The new contractor is therefore entering a project that may have been started with subpar design and/or quality. Due to the significant liability it would assume, the new contractor is likely to add a risk premium to the price to complete the project.

When a contractor defaults on its obligations, the owner will face both monetary and time costs. There will inevitably be a time lag as the first contractor de-mobilizes and the new contractor prepares itself to begin work. In addition to time and direct construction, the owner may face incidental costs, such as those of its own labor resources, including consultants and legal. The owner may additionally have to cover time-contingent costs such as on third-party agreements, temporary construction easements and other related expenses. Moreover, if the spread between the surety bond and completion cost exceeds the project's contingency budget, the owner will face the need to secure additional funding—a time consuming process that carries significant reputational risks.

These risks, however, are tempered by the fact that contractor defaults on large infrastructure projects are rare, as a result of extensive vetting by public agencies, rating agencies and sureties prior to executing an agreement. Nevertheless, as in the case of the I-69 P3 in Indiana as described later in this paper, contractor defaults are still a possibility, and owners must consider bonding as a means of protection.

## Trends on Large, Complex Design-Build Bridge Projects

### SR-99 TUNNEL, ALASKAN WAY VIADUCT REPLACEMENT PROGRAM

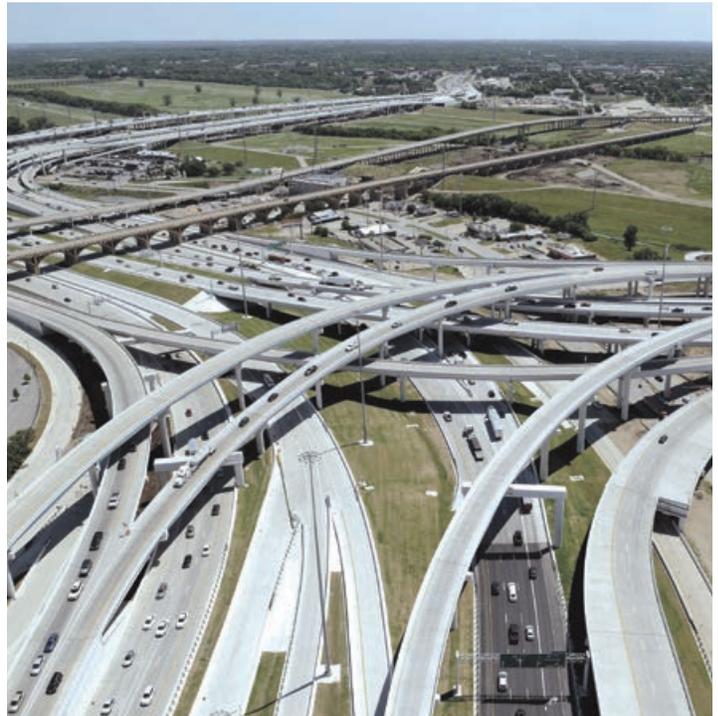
The SR-99 design-build project is one of 32 elements that comprise the Alaskan Way Viaduct replacement in Seattle, WA. The tunnel scope of work includes a 9,270-foot bored tunnel and interior stacked roadway with two lanes in each direction. The design-builder, a joint venture between Dragados USA and Tutor Perini Corporation, is also constructing a cut-and-cover tunnel at the north and south portals. The design-builder is also responsible for fire, life and safety systems, tunnel operations buildings, traffic management systems, overhead signage and electronic tolling equipment. The contract requires a performance bond in the amount of \$500 million.<sup>3</sup> The total contract value is \$1.21 billion. In 2009, the Washington State Department of Transportation issued a project surety analysis to determine the default cost exposure. The analysis determined that the state could face a maximum total cost exposure of 52 percent of total project cost. The report determined that performance and payment bonds equal to a total of \$642 million would be sufficient to protect the state from the financial risk of contractor default.

### TAPPAN ZEE BRIDGE

Valued at \$3.98 million dollars, the project is a new, 3.1-mile bridge across the Hudson River that connects Rockland and Westchester counties, delivered under a design-build contract. The New York State Department of Transportation (NYSDOT) shortlisted four design-build teams to propose after a prequalification process in 2012. Four teams were shortlisted. NYSDOT received three proposals and selected Tappan Zee Constructors joint venture, which submitted a proposal at least 20 percent lower in cost than the other proposers.<sup>4</sup> The contract required a performance bond equal to \$1.5 million or 30 percent of the contract price (whichever was greater; along with a payment bond of similar value). The contract allows for the replacement of the bond with a warranty bond in the amount of 10 percent of the contract price after reaching final acceptance by the project owner.<sup>5</sup> The warranty bond serves to guarantee performance of work, including warranty work, and frees up the developer's bonding capacity.

### DALLAS HORSESHOE

The Texas Department of Transportation awarded the design-build contract to Pegasus Link Constructors (a joint venture of Fluor Enterprises and Balfour Beatty Infrastructure) in 2013. Three joint ventures proposed on the project. The contract also includes a capital maintenance agreement. Valued at \$818 million, the project includes a roadway design upgrade, replacement of two bridges over the Trinity River, construction of additional lanes and the construction of the Margaret McDermott bridges. The project used staggered bonding requirements. The design-builder was required to produce a performance bond of \$50 million at the issuance of notice to proceed and then was required to increase the bond to \$608,777,000.<sup>6</sup> The contract also required a retainage bond of 4 percent of the contract value to be used as a guaranty for overpayments, liquidated damages, lane rental fees and other deductions or damages. Once the segments were complete, the design-builder could secure a warranty bond to release the performance and payment bonds.



Dallas Horseshoe

<sup>3</sup> SR 99 Bored Tunnel Alternative Design-Build Project. Washington State Department of Transportation, 2010. Retrieved on November 1, 2018: [ftp://ftp.wsdot.wa.gov/contracts/7999\\_Sr99\\_BoredTunnelAlternativeDesignBuildProject/ConformedDocuments/ContractConformed.pdf](ftp://ftp.wsdot.wa.gov/contracts/7999_Sr99_BoredTunnelAlternativeDesignBuildProject/ConformedDocuments/ContractConformed.pdf)

<sup>4</sup> "New NY Bridge Project to Replace Tappan Zee, Gets Final Contract Approval" Tappan Zee Hudson River Crossing Project, January 18, 2013. Retrieved on November 1, 2018: <https://www.newnybridge.com/new-ny-bridge-project-to-replace-tappan-zee-gets-final-contract-approval/>

<sup>5</sup> "Design-Build Contract Documents, Part 1 Agreement, Final for Execution." Tappan Zee Hudson River Crossing Project, November 21, 2012. Retrieved on November 1, 2018: <https://www.newnybridge.com/documents/bidprocess/part-1.pdf>

<sup>6</sup> Horseshoe Project Development Agreement. Texas Department of Transportation, February 20, 2013. Retrieved on November 1, 2018: <http://www.txdot.gov/inside-txdot/projects/studies/dallas/horseshoe/executed.html>

## HIGHWAY 61, HASTINGS BRIDGE

The Hastings Bridge in Minnesota opened in June 2013 and is the longest free-standing tied-arch bridge in North America. The bridge is 545 feet in length and 104 feet wide. Comprised of steel arches and hanger assemblies, the roadway is poured-in-place concrete deck. The design-build contract was awarded in 2010 to Lunda/Ames. The Minnesota Department of Transportation used a best value contracting process to shortlist three design-build teams. The contract cost is \$120 million. Per Minnesota statute, the project required a performance bond valued at 100 percent of the contract value.

### I-69

P3s require state enabling legislation and, in some instances, have separate performance security requirements. Given the size of many transportation P3s in the United States, performance bond requirements may differ from the traditional approach to public works bonding. In the case of I-69 in Indiana, the Indiana Finance Authority (IFA) terminated the design-build-finance-operate-maintain (DBFOM) agreement with I-69 Development Partners (Grupo Isolux Coran) in June 2017. The contract value in 2014 was \$325 million and the developer submitted a bid approximately 30 percent lower than the other three proposers. After four delays and multiple claims of non-performance, the developer went into default.

The developer was required to maintain a payment bond equal to five percent of the total project capital cost and a performance bond equal to 25 percent of total project capital cost.<sup>7</sup> When the developer defaulted, the payment bond provided \$16.25 million and the performance bond provided \$81.25 million in security. IFA then became responsible to bondholders and for damages. IFA paid \$12 million to bondholders, negotiated a \$50 million settlement payment from the developer, and covered \$115 million in increased construction costs. As a result, the Indiana legislature passed a bill that requires the IFA to strengthen its evaluation criteria to account for previous project experience, U.S. project management experience, and a review of financial statements. In this instance, the procurement process did not result in the selection of a developer with the appropriate financial solvency and experience to take on the project. Additionally, the performance security requirements did not provide adequate protection to the project owner when the developer defaulted.

## MARYLAND PURPLE LINE LIGHT RAIL

The Maryland Purple Line Light Rail Project is a 16.2 mile, 21-station, east-west, light rail transit way in the southern Maryland/Washington D.C. metropolitan area. The Maryland Department of Transportation (MDOT) and the Maryland Transit Administration (MTA) selected Purple Line Transit Partners (PLTP) as the design, build, finance, operate, and maintain (DBFOM) developer of the Purple Line over a 36-year term. PLTP is comprised of three equity partners: Meridiam Infrastructure Purple Line; Fluor Enterprises, Inc; and Star America Fund GP, LLC. PLTP has committed to holding equity and being a part of the project for the full 36-year DBFOM term. The project's total capital cost is \$2.4 billion. PLTP placed payment and performance bonds both equal to 55 percent of the design and construction contract amount for the total amount of \$906 million. Maryland's Little Miller Act requires performance security bonds to be at least 50 percent of the construction contract value<sup>8</sup>. MTA also received three letters of credit totaling \$20 million for the period between commercial close and financial close.<sup>9</sup>



*Purple Line Light Rail*

<sup>7</sup> I-69 Executed Public-Private Agreement. Indiana Finance Authority, April 8, 2014.

Retrieved on November 1, 2018: <https://www.in.gov/ifa/files/Executed%20PPA%20and%20Exhibits-Attachments%20Part%202.pdf>

<sup>8</sup> Maryland Code, § 17-101-111. Retrieved on November 1, 2018: <https://www.zlien.com/bond-claims/maryland-little-miller-act-statute/>

<sup>9</sup> Maryland Board of Public Works, April 6, 2016. Retrieved on November 1, 2018: <https://bpw.maryland.gov/MeetingDocs/2016-Apr-6-Agenda.pdf>

## Alternatives and Suggestions

The following are best practices that a project owner may consider in determining whether to allow a partial bond in place of 100 percent performance bonding requirement.

1. The owner should establish the surety market's capacity and interest in the project prior to commencing the procurement process. Owners may consider hosting a forum with the surety market that allows the owner to gain feedback on commercially reasonable terms, including feedback on the design of the bond form and the number of sureties that are likely to have capacity for a 100 percent performance bond.
2. The owner may conduct a probable maximum loss study to understand the ramifications of project-specific risks and the financial consequences that the owner may face if the bonding amount is less than 100 percent. On the Alaskan Way Viaduct project, the owner conducted a study to evaluate the maximum probable loss that could occur on the project. Determining this amount for a given project serves as a critical step in evaluating whether it is wise to reduce the performance bonding requirements and the extent to which an owner can do so without assuming more risk than it can bear. Projects with a maximum probable loss approaching the full contract value may be more suited to a 100 percent performance bond, while projects with lower maximum probable losses have greater flexibility to reduce performance bonding requirements.
3. The owner may consider other methods of achieving the protection it deems appropriate from the surety industry. For example, an owner might consider allowing for co-sureties, which means that two or more sureties may work together to write the performance bond. Meeting with the surety industry would be helpful to determine if this is a feasible or desirable option for a particular project.
4. The owner may consider holding an industry forum with prospective contractors to gather their opinion on the issue. The forum may address whether contractors have enough bonding capacity and/or other forms of protection they might propose in place of a 100 percent performance bond.
5. An owner may consider phased bonding, where the performance bonding requires shifts over the life of the project at certain pre-determined milestones. For example, on a design-build project, the owner might consider eliminating or imposing a minimal requirement during initial design but before breaking ground, since there is little potential exposure before construction begins. These tactical strategies influence the shape of the bond itself, and thereby increase the number of contractors that can find markets to place a performance bond of significant value.
6. An owner may also consider an expedited dispute resolution (EDR) bond, in which there is a maximum period for resolution if there is a dispute between a surety and an owner. A dispute may occur if a surety contests a claim of default made by an owner. EDR bonds define a specific timeframe by which a surety is obligated to respond and a separate dispute resolution process. An EDR bond was used on the Rapid Bridge Replacement project in Pennsylvania, which required an 82-day resolution timeframe.<sup>10</sup> For this project, the surety provided assurance to the rating agency of its adherence to the dispute resolution results. An EDR bond may provide reassurance to the owner as to the timeliness of a surety's response.
7. If an owner decides to require a performance bond for less than 100 percent of the contract value, it should tailor the evaluation criteria during procurement to account for the reduced screening by the surety industry. For example, the owner may rely more heavily on factors that address the contractor's current financial capacity, litigation history, potential solvency issues and information gained from past project references.<sup>11</sup> The underwriting process for performance bonds is an indicator of financial health, not a comprehensive analysis of previous project experience. A contractor with poor performance history can access the same performance bond as a contractor with good performance history as long as each contractor has comparable financial assets. Evaluation criteria, then, should be written to seek a contractor that can provide the best value and should place an emphasis on previous project history. The goal of adjusting the evaluation criteria is to assess factors relevant to the contractor's likelihood of default.
8. An additional consideration for an owner that accepts a performance bond less than 100 percent of contract value is to determine whether and by how much the bonding will increase in the event of change orders that increase the contract price. Typically, the bond amount is required to increase when there are material change orders; however, if the risk profile remains the same despite the change, there may not be a need to increase the bond each time the contract value increases.

## Conclusion

Whether to require a performance bond in an amount less than 100 percent of the contract value involves a trade-off between the liability risks of contractor default and the increased competition from reducing the bonding amount. If an owner is interested in the potential increase to competition that comes from reduced bonding, the owner should generally conduct an analysis of the maximum probable loss on the project and meet with the surety industry and potential contractors to evaluate whether it is viable to accept a performance bond for less than 100 percent of the contract value.

<sup>10</sup> "Expedited Performance Bonds: A new type of performance security hits the US P3 market." Ashurst, March 5, 2016. Retrieved on November 1, 2018: <https://www.ashurst.com/en/news-and-insights/legal-updates/expedited-performance-bonds-a-new-type-of-performance-security/>

<sup>11</sup> Federal Highway Administration. "Performance-Based Contractor Prequalification as an Alternative to Performance Bonds." Publication Number FHWA-HRT-14-0345, August 2014. Retrieved on November 1, 2018: <https://www.fhwa.dot.gov/publications/research/infrastructure/14034/14034.pdf>

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