

Public Private Partnerships in California

Phase II Report

Section IV: Structuring P3 Projects

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Acronyms and Terms Defined

Table 1: Acronyms and Terms Defined

Acronym or Term	Definition
Asymmetric Information	Transactions where one party has more or better information than the other party
CPI	Consumer Price Index
Joint Venture	Two or more entities sharing revenues, expenses, and assets for a finite period of time to create or develop a project
NEPA	National Environmental Policy Act
O & M	Operation and Maintenance
P3 or P3s	Public-Private Partnership
Principal-Agent Relationship	An arrangement in which one entity legally appoints another to act on its behalf. In a principal-agent relationship, the agent acts on behalf of the principal and should not have a conflict of interest in carrying out the act.
Right to Work States	A Right to Work law secures the right of employees to decide for themselves whether or not to join or financially support a union.
SWAM	Small Women- and Minority Owned Businesses
X-inefficiencies	Occurs when technical-efficiency is not being achieved due to a lack of competitive pressure

Introduction

In this section of the report, we consider the structure of P3s through analyzing the strengths and weaknesses of four P3 contracts. We begin with the Presidio Parkway contract. The Presidio Parkway contract is the most recent P3 contract that Caltrans has prepared; as such, we used it as a baseline to represent, a) the current thinking and positions of the department; b) the department's best efforts; and, c) the best of industry-wide current practice. Using Presidio Parkway as a base, we compare and contrast it with three other P3 contracts, one each from Virginia, Texas, and Puerto Rico: the Pocahontas Parkway, Sam Rayburn Tollway, and PR-22/PR-5, respectively. We chose these contracts because, a) they are contemporary and domestic P3 contracts; b) people in the industry frequently hold up these three locales as models for P3 implementation (see Section VI Market for Private Capital); and, c) the final signed versions were readily available to us. We focus our attention on areas where the out-of-state contracts are superior to Presidio Parkway; our assumption is that any future California P3 would take the existing strengths of that contract and build up from that baseline.

Please note that our analysis does not include advice that is not unique to public-private partnership contracts (e.g., clearly defining terms or establishing an order of precedence).

We outline our literature review below. In the four sections that follow we describe each of the four contracts we reviewed. We start with a very brief background of the facility. Then we discuss the following aspects of each contract, risk sharing, responsibility and accountability, enforcement and assurances, as well as contingency planning and revenue

capturing. After the discussion of each contract, we compare and contrast all four. Finally, we offer a brief conclusion.

Literature review

P3 projects are typically large in scale and involve many partners. Private financial participation may range from being a modest part of the total financing package to the entire financial package. Funds may also come from many different public sources, from federal to local. The financial package may involve loans (e.g., TIFIA) as well. Funds may become available at different times in the project. The number of variables implies a complex deal structuring. In a study of City Link in Melbourne, Australia, Sagalyn finds that public officials may not pay sufficient attention to the planning and contracting phases. He concludes that governments “tend to favor rapid implementation over due process, with little concern for consumer protection or future flexibility” (Sagalyn 2007, p. 17).

Asymmetries in information affect deal structuring. Moreover, finance firms have expertise in financial instruments and requirements for risk and return, but they have few skills in the planning and approval process for major transportation projects, or in transportation demand analysis (AECOM 2007, p. 82; Brown 2007, pp. 321-324; and, Vining and Boardman 2008, pp. 150-151). Comparably, state and local DOTs have experts in planning and conventional funding mechanisms, but they have less expertise in private financial instruments (Brown 2007, pp. 321-324; Vining and Boardman 2008, pp. 150-153). Thus, public-private partnerships enable private firms and public agencies to combine their respective expertise in delivering projects for public utility.

Public-private partnerships offer governments the ability to monetize the value of their assets and use this revenue to advance the needs of the public (Brown 2007, p. 321). In traditional projects, public agencies manage cost increases by identifying ways to pay over a longer time horizon or by reallocating funds from other projects (Brown 2007). In contrast, unexpected costs in P3 projects can threaten project viability (Flyvbjerg 2005, pp. 131-132). Thus, the national history of P3s is one of institutional learning, as many early projects led to losses or even bankruptcies, lack of adequate safeguards for accountability and the public interest, and other problems that may have made P3s less attractive to potential private partners (AECOM 2007, pp. 74-75; and, Vining and Boardman 2008, pp. 154-156).

Well-written contract provisions are essential for successful public-private partnership implementation (Vining and Boardman 2008, p. 153). Indeed, a robust contract provides a structure for defining roles and reducing uncertainty in the P3 process. If properly planned, P3s can shift risk away from the public, accelerate project construction, promote efficiency gains, and also allow for flexible ways for the public and private sector to generate future revenues (Vining and Boardman 2008; AECOM 2007).

A 2007 AECOM report identified several key components of successful P3 implementation. Specifically, clauses that utilized the strengths and avoided the weaknesses of the respective parties, promoted long term trust and interdependence, clearly defined roles and liabilities for each party, and promoted the swift and conflict free construction of a project led to successful implementation (AECOM 2007, p. 75). Without careful attention to contract details, however, increased transaction costs, increased financial risk, and opportunistic firm behavior may offset the gains from removing x-inefficiencies (Vining and Boardman 2008, p.

150). By including clauses that promote cooperation and non-zero-sum gains, public sponsors can form a healthy partnership that aligns the inherently conflicting goals of the public and private sectors (AECOM 2007, p. 75; Gehrt, Klatt & Beckers 2010; Rosenau 1999, p. 22).

Clearly defined roles and responsibilities for both the public and private sector are paramount in P3 contract structure (AECOM 2007, p. 75). Uncertainty in who is responsible for what can lead to delays, strife, and a lack of trust between parties (AECOM 2007, pp. 75-76). Partners can avoid lawsuits and construction delays, which can lead to project failure, through effective planning and clear contract clauses (AECOM 2007, p. 78). Delays in construction and contract negotiation can dramatically increase costs, therefore the need to have the public and private sector working as partners, rather than adversaries, is key to keeping the project moving forward (AECOM 2007, p. 75).

Those in charge of writing large-scale P3 infrastructure contracts must be forward-thinking due to the fact that these projects often have 30- to 100-year life spans. Provisions such as non-compete clauses and compensation events are major threats to the long-term viability of a project (Baxandall, Wohlschlegel & Dutzik 2009, p. 18). These clauses were included in some previous P3 contracts, mostly due to the private operators' fears that a competing public road would limit private toll revenues or the ability of the private operator to sell bonds (Giuliano, Schweitzer, Wang, & Minch 2010, p. 13; Baxandall, Wohlschlegel & Dutzik, 2009 p. 18). Clauses like these are dangerous in that they limit state and local governments' ability to respond to transportation demand increases, possibly increasing long-term congestion and/or project costs (Giuliano, Schweitzer, Wang, & Minch 2010, p. 13).

Those delegated the task of writing P3 contracts should structure the contracts to be flexible with regard to future revenues, future construction, future hazards, and future changes in technology (AECOM 2007, p. 75). Well-written contracts can greatly increase public-private partnership success by sharing risk between the public and private sectors, clearly defining and delegating tasks based on the comparative advantages of the public and private sectors, and forging healthy and flexible long-term relationships (AECOM 2007; Gehrt, Klatt & Beckers 2010; Vining and Boardman 2008, pp. 150-153).

Presidio Parkway

Background

The San Francisco County Transportation Authority (SFCTA) and Caltrans championed the Presidio Parkway, which will be a regional gateway between the Golden Gate Bridge and the City of San Francisco (SFCTA 2011). SFCTA's Prop K sales tax, the State of California, the Metropolitan Transportation Commission, and the Golden Gate Bridge, Highway, and Transportation District also provided additional funding (SFCTA 2011). The project, which will replace the aging Doyle Drive, will improve the roadway's seismic and structural integrity while relieving traffic congestion around the Golden Gate Bridge (Presidio Trust 2011). Caltrans sought a P3 for this replacement project to glean the efficiencies of private sector knowledge while reducing costs and freeing state funding for other uses (Presidio Parkway 2011).

The Presidio Parkway is intended to be a non-tolled road, with the private firm receiving a \$173 million concessionaire payment following construction, followed by annual availability payments (Presidio Parkway 2011). Caltrans formed this P3 in the hopes of guaranteeing

project delivery by a certain date within certain budgetary constraints; the department sought private sector quality and efficiency.

Risk Sharing

The Presidio contract represents an effective and well-planned agreement. As we will show, the Presidio contract helps mitigate some environmental risk, shifting a significant portion to the operator. The public sponsor in this case is not responsible for delay costs related to the removal of pre-existing hazards, but pays for the private firm's additional work (Caltrans §4.10.2.2). The public sponsor also retains some major environmental risk in the rare case that off-site removal cannot remediate soil conditions (Caltrans §4.10.2.6). The contract also shifts the risk of project delay to the private operator to possibly protect the public sponsor from negative publicity (Caltrans §3.2.1.1-2).

Responsibility and Accountability

The Presidio contract explicitly details the relationship between the public sponsor and the operating firm. The Presidio contract also contains provisions that must be included in any contract the firm enters with a subcontractor (Caltrans §7.2.6 & §7.3.2). The agreement prohibits the firm from entering contracts that extend beyond the term of the original agreement. This condition is crucial in insuring the public will not be responsible for the firm's contracts with third parties upon transferring control to the public sponsor (Caltrans §3.2.3.3). The contract also clearly states that the public sponsor is not a co-signor to the firm's debt, although the public sponsor retains some financial (interest rate related) risk (Caltrans §15.3.1). Interest rate changes or inflation could possibly cost the public sponsor over the long term (Caltrans §15.2.8).

Moreover, the department bears the risks and benefits of differences in the weighted average cost of capital (WACC) between those obtained at financial close and those assumed in the original financial model. The department is responsible for 85 percent of any loss due to an increase in the base rate of interest and receives 85 percent of the benefit for any decrease in basis point movement (Caltrans §15.2.9.3). These losses or gains derived from differences in WACC are distributed through adjustments in the availability payments made to the operator (Caltrans §15.2.8).

The Presidio contract also places an emphasis on small and disadvantaged business participation (Caltrans §7.8.1). This provision has led to the Federal Highway Administration recognizing the contract as a national model for small business participation (Graham 2010). Within the contract, the responsibilities delegated to the private firm mostly involve increasing transparency between the two partners. By building interdependence, which leads to trust, through well-written contracts, it is possible to foster a healthy, mutually beneficial relationship between the public and private entity (AECOM 2007, p. 75; Lundin 2007, p. 653). By providing clauses that protect the public sponsor from litigation, Caltrans drastically decreases the chances of P3 failure.

Enforcement and Assurances

Another major indicator of P3 success is a clearly defined means of enforcing contract covenants; by explaining consequences of misconduct or negligence, the P3 contract decreases the chances of opportunistic behavior resulting from the different goals of the public and private entities (AECOM 2007, pp. 29, 75; Vining and Boardman 2008, pp. 151-152). The Presidio contract specifically states that if the firm is habitually non-compliant, the public

sponsor can increase monitoring at the firm's expense (Caltrans §6.8.1). The contract also requires the firm to keep all electronic documents for at least four years and paper documents for five years or until the resolution of any dispute involving them (Caltrans §19.6.4.11 & §21.1.3).

The contract also contains a section that insures the private firm does not misrepresent the monetary benefits it will obtain from the P3 agreement. Section 17.1.1 makes the firm attest to the fact that the financial model they present to the public sponsor is the same model they use to decide whether to enter the P3 agreement (Caltrans). This clause protects the public sponsor as it provides a means for insuring the private firm uses a transparent and accurate means of calculating their benefits from the project (Vining and Boardman 2008, p. 153).

Contingency Planning/Revenue Sharing

The contract contains policies that seek to minimize opportunistic behavior from the private firm. Section §1.3.3 and §3.1.2 provide public sector safeguards that limit the firm's ability to cite faulty reference documents, surveys, or reports, as a means of collecting reimbursement from the public sponsor (Caltrans). To provide protection from excessive changes in the operation and maintenance costs of the Presidio Parkway, the contract shifts the risk of this possibility to the operator (Caltrans §5.2.2.1). It also includes a \$2 million deductible for changes in O&M requirements, further protecting the public sponsor (Caltrans §5.2.2.6).

The Presidio contract has particularly notable contingency and long-term planning provisions. These contract clauses increase the flexibility of P3 contracts, allowing them to

change and adapt to different P3 environments and economic conditions (Athias and Saussie 2010, pp. 2-5). The project's location within San Francisco, a city with high seismic activity, is an inherent risk. The contract allows for a \$10 million seismic deductible to help mitigate that risk (Caltrans §9.1.3.2). For example, if a seismic event struck the region and there was only \$2 million in damage to the project, the firm would have to cover that expense because it is less than its deductible. This seismic deductible, along with all other contract deductibles, is also CPI-adjusted to protect Caltrans from inflation risk (Caltrans §9.1.4).

The Caltrans contract also explicitly requires prevailing wages (Caltrans §7.6.1). Unlike the other three contracts we analyze below, the Presidio contract also included long-term revenue-capturing mechanisms. Private firms, which seek to maximize profit and minimize risk, are averse to giving up possible sources of future revenue (Vining and Boardman 2008, p. 152). In the case of Presidio, however, the public sponsor secured a significant portion of these for public benefit. One such revenue capturing mechanism is the public sponsor's retention of 60 percent of any gain from refinancing. By minimizing the amount of money the private firm can collect from refinancing, the Presidio contract effectively discourages opportunistic refinancing that might change the obligations or incentives of the private firm (Gehrt, Klatt & Beckers 2010, pp. 7-9).

As another example of Caltrans capturing future savings, should the final plan for Presidio require less landscaping than originally planned, the firm and public sponsor will split equally the savings from that overestimate (Caltrans §4.12.2.1-4). The public sponsor also captures 100 percent of all cost savings due to changes in work they propose (Caltrans §10.1.3).

Additionally, 50 percent of any cost savings due to changes that the operator proposes also goes to the public sponsor (Caltrans §10.2.4 & 5). These two clauses provide the public sponsor a means of capturing excess revenue as well as a disincentive for the operator to inflate costs.

Caltrans also included a contract clause that deals with future tolling on the parkway. If section 143(q) of the Streets and Highway Code is repealed or amended, the Presidio Parkway could become a toll road (Caltrans §11.6). If this were to take place and the private firm decided to toll, the public sponsor would no longer have an obligation to provide availability payments (Caltrans §11.6.2). Aside from not having to make payments to the private operator, Caltrans would also capture 80 percent of the toll revenue remaining after subtracting the price of the former availability payments (Caltrans §11.6.3). These provisions, which allow for extensive revenue capturing opportunities for the public sponsor, provide a means of sharing the costs/benefits of project changes.

Pocahontas Parkway

Background

In this section we review the contract for the Pocahontas Parkway. In 2002, Fluor Daniel/Morrison Knudsen and the Virginia State Department of Transportation (VDOT) opened the Pocahontas Parkway, an 8.8-mile stretch of tolled highway near Richmond (About Pocahontas 895, 2011). Demand estimate inaccuracies led to the original partner, Fluor Daniel/Morrison Knudsen (FD/MK), nearly defaulting (Pocahontas 2011).

FD/MK proposed a phased approach, in which they would first build the most necessary ramps and bridges and then further expansions to meet traffic demand (Transurban 2006). Officials projected monthly revenues of \$1.4 million for the project, but actual revenue amounted to only \$630,000 (USDOT 2007, pp. 23). The Pocahontas Parkway Association (PPA), which is the non-profit association responsible for issuing bonds for the Pocahontas Parkway, carried most of the financial risk, even though it had little decision making authority (Transurban 2006).

Moreover, the establishment of a 63-20 not-for-profit corporation makes tax-exempt bonds more accessible for P3s (Allison 2011). The PPA, which was only the second project in the United States financed through a 63-20 corporation, was in charge of financing, constructing, and operating the project while FD/MK was in charge of the design/build phase (FHWA 2007; Wang 2010, pp. 147-149). Although USDOT has not directly condemned the use of 63-20 corporations as a means of providing transportation infrastructure, it admits that transportation projects reliant on 63-20s have “struggled” (USDOT 2008, p. 15).

FD/MK had very little at stake in the project compared to the non-profit corporation that issued the debt and therefore was immune to the fact that traffic volumes failed to reach their projected levels (Transurban 2006). Although some of the blame can be attributed to poor contract arrangements/incentives, this is a keen example of the risk inherent in relying on travel demand forecasts to plan and implement large transportation infrastructure projects (Flyvbjerg et. al. 2005, p. 140). Despite significant support for the project, these missteps by

VDOT violate four of the seven project development steps/critical success factors laid out in AECOM's P3 guidebook (AECOM 2007, p. 80).

Consequently, VDOT restructured the contract in 2006, re-leasing the parkway to Transurban, who agreed to manage, operate, and maintain the facility (Pocahontas 2011). Unlike the previous contract with FD/MK, the Transurban agreement provides non-recourse financing, which protects the commonwealth if the project fails to generate the revenue or traffic volumes predicted (Pocahontas 2011). We review the second contract (i.e., the one between Transurban and the Commonwealth) below.

In 1995, The Commonwealth of Virginia passed a Public-Private Transportation Act (PPTA), which encouraged P3 usage for large transportation infrastructure projects (Pocahontas 2011). The PPTA provided alternative methods of procurement, including competitive sealed bidding and negotiation procedures. It also encouraged the state to look beyond the design-build form of partnership to forms that share risk and cost on a greater scale (Pocahontas 2011). Guidelines such as these are vital to successful P3 project implementation (Vining and Boardman 2008, pp. 152-153, 157; see also Phase I Final Report #2 & #3 pp. 38-40).

Risk Sharing

The Pocahontas contract places environmental risk on the contractor requiring them to go through the NEPA process (Pocahontas §3.02 b. vii) and bear the costs of any necessary regulatory approvals (Pocahontas §7.06 a-c). Transurban would only be required to seek these approvals for the airport connector road, as the project is nearly complete as per the first contract with FD/MK. Other than pre-existing hazardous materials, for which the department

must compensate the operator, the operator bears all environmental risk related to the project and the construction of the airport connector road. To make sure the department can first observe the nature and extent of the problem, the operator must contact the department before attempting to remediate such a problem (Pocahontas §8.14 c).

The Pocahontas Parkway Project, which was mostly constructed by FD/MK and the Pocahontas Parkway Association, as per the original contract, necessitated warranties against design/construction defects. Now that FD/MK is no longer the contractor, the department takes on the risk for defects caused by the former partnership (Pocahontas §3.03 b. viii). Other than warranties against defects, most construction risk has shifted to the firm. Any delay in project right-of-way acquisitions are the sole cost/risk of the operator, assuming the department did not cause the delay (Pocahontas §7.02 g). Also, the firm is exclusively responsible for personal injury risk, automobile liability, builder's risk, and worker's compensation insurance (Pocahontas §13.03 d).

If the tollway is made into an interstate, the private firm bears the risk of all approval/work related expenses this may cause (Pocahontas §7.09). The firm is also responsible for updating the public on the status of the airport connector road, as well as any changes in toll rates; this responsibility may represent an attempt to shift public approval risk to the operator (Pocahontas §4.01 & §7.05).

Responsibility and Accountability

The operator is solely in charge of developing, financing, maintaining, improving, and modifying the tollway, while also bearing the risk of interest rate changes (Pocahontas §3.02 b

ii; Pocahontas §6.01 a). The contract includes a clause that clearly states that no joint venture or principal-agent relationship can be formed between the department and operator; such a clause is also present in the other three contracts we reviewed (Pocahontas §3.04 a-b). This clause minimizes the risk taken on by the public agency and is further clarified by §6.01 b., which states the department does not endorse any operator debt and is not responsible for that debt or interest on it. To further protect the department from refinancing that might change the firm's obligations or incentives, §6.06 a. outlines what the firm must do prior to refinancing. The clause, which limits what types of refinancing is allowed, provides protection from opportunistic refinancing or conflicts of interest (Gehrt, Klatt & Beckers 2010, pp. 7-9).

The Pocahontas Parkway contract provides a very detailed explanation of the individual parties' responsibilities and rights. To assure quality work from the operator's subcontractors, VDOT included clauses that detail the requirements all contractors and subcontractors must fulfill (Pocahontas §7.03 a-c). Additionally, the contract specifically protects the department against claims/charges against subcontractors, making the quality of their work the responsibility of the operator (Pocahontas §11.02 b & e). If the operator repeatedly violates any of these clauses, the department can increase monitoring of the project at the operator's expense (Pocahontas §8.06).

The Pocahontas Parkway contract also contains provisions that promote minority and female equity within the P3 project. The contract establishes a goal of 20 percent participation by small, women- and minority-owned business reporting (SWAM). Also, the operator must maintain records of documents and payments to SWAM for three years following their

execution (Pocahontas §11.03). Pocahontas §11.01 requires the operator and its contractors to avoid discrimination against any person or group on the account of age, sex, marital status, race, creed, color, national origin, religion, or handicap (Virginia has no anti-discrimination law for sexual orientation).

Enforcement and Assurances

Another key clause in the Pocahontas Parkway contract is §8.08c, which requires the operator to make five-year assessments of all projected repair costs and a projected schedule to remedy those problems (AECOM 2007, p. 47). The department can reject the schedule if it feels that any of the underlying assumptions used to calculate these costs are faulty or inconsistent with good industry practice (Pocahontas §8.08c). Once the two parties have agreed upon a schedule for projected costs, if the operator fails to accomplish a task for 30 days after the agreed upon date, the department can intercede and do the work. If this situation occurs, the operator is obligated to pay the department's costs, a 10 percent contingency fee, and all third party procurement costs if the department contracted the work (Pocahontas §8.06e). By encouraging swift action by the firm and discouraging an overestimation of costs, the contract increases the chance of lower production costs (Vining and Boardman 2008, p. 153).

The Pocahontas Parkway contract includes covenants that ensure private firm accountability. By requiring the operator to maintain proper books in accordance with accepted accounting principles, the department protects itself from opportunistic behavior (Pocahontas §18.01). Similar to the Presidio agreement, the Pocahontas contract requires the operator to vouch for their financial projections they used to enter the P3 (Pocahontas §15.02).

To further increase transparency and synergy between the operator and department, the contract includes a clause related to intellectual property and other studies, data, or reports; these types of documents are the exclusive property of the department, although VDOT must conceal certain trade secrets (Pocahontas §18.03-18.04).

The authors of the contract sought to mitigate possible conflicts of interest between the operator and department and included clauses to protect against such behavior. The contract specifically outlines hiring practices in relation to gifts or bribes, which will lessen the chance of a moral hazard arising (AECOM 2007, p. 18; Roach 2011, p. 22; and, Pocahontas §8.12). To build further interdependence between the agencies, the department can procure contracts for ice and snow removal at comparable rates if the operator requests it. Although VDOT is not liable for these contractors' performance, using the pooled contracting power of a state government helps build upon other P3 advantages (Pocahontas §8.15; AECOM 2007, p. 75).

Contingency Planning/Revenue Sharing

To assure the operator acts accordingly with department wishes, the operator must first receive written department approval for any project enhancements (Pocahontas §9.02). VDOT funds such departmental oversight with an annual O&M budget of \$50,000, adjusted each year by the change in CPI (Pocahontas §10.02 b). The airport connector road, which the operator plans to build, is contingent on the operator receiving at least \$150,000,000 in TIFIA loans (Pocahontas §9.01 b).

Virginia suffers far fewer natural disasters than California and therefore includes less contingency planning elements in its contracts. The contract deals with traffic detours during

emergency periods and permits the department to redirect traffic to the tollway, with no compensation, as long as it uses competing roadways as well (Pocahontas §12.03 a vi). Also, in the rare case of force majeure events that damage the property (after insurance collection), to the degree to which the operator is no longer able to financially manage the roadway, the operator can recoup these losses by raising tolls (Pocahontas §14.02).

The Pocahontas Parkway contract, which built upon a previously failed P3 contract, contains many long-term planning clauses important to the success of the partnership. Competing facilities, which lower the profitability of toll roads, are detailed in Pocahontas §3.02 and §12.01. The department reserves the right to offer advice and create master plans that serve as models for building competing highways; the department is not liable unless it is directly involved with constructing the competing facility. By protecting the right of the department to plan for future state needs, while only marginally limiting its ability to build, a healthy and trusting relationship can form between the public and private partners (AECOM 2007, p. 75). Although the non-compete clause includes many provisions that protect the public interest, it still has the potential to be a contentious issue and/or to limit the Commonwealth of Virginia's transportation options.

The agreement between VDOT and Transurban also acknowledges the department's right to build, plan, and finance anything they feel is in the state's best interest. Both parties, having agreed upon a means of remedying competing facilities related problems, will not file legal action against one another in such a case. If the operator files a claim against the department in an attempt to stop them from exercising this right, they immediately and

automatically are required to pay all costs and expenses the department incurs because of said claim (Pocahontas §12.01 f). Also, if the firm fails to obtain the required TIFIA financing for the airport connector road within 150 days of the NEPA process,

- the operator loses all rights to the airport connector road, without compensation;
- the department can (but does not have to) build the airport connector road themselves;
- it can be tolled or non-tolled;
- it will not be considered a competing roadway; and,
- the operator has no interest in or claim to toll revenues, but they can set up their own tolls at the intersection to make sure vehicles using airport road and project area have to pay the operator.

These provisions encourage the firm to act swiftly while also protecting the department's long-term rights and plans (Pocahontas §9.01).

The term of the contract is 99 years (Transurban 2006); however, the department can terminate the contract at any point after 40 years. To cancel the contract, the state must provide a letter specifying termination date, as well as pay the operator the current project value based on a third party appraisal (Pocahontas §16.01). As a final protection against future changes in the law, the contract also states that the remainder of the contract survives any individual clause being removed/deemed illegal (Pocahontas §20.13).

Sam Rayburn Tollway (SH 121)

Background

The Sam Rayburn Tollway is a 26-mile long road that opened in 2006 near Dallas/Fort Worth, Texas (Sam Rayburn Tollway 2011). The project connects the quickly expanding suburban areas of Collins and Denton County. TxDOT integrated the tollway into its system steadily as the five-segment project required approximately five years for construction (Sam Rayburn Tollway 2011). The project was originally a P3 that included an upfront concession fee as well as annual payments to the public department (Samuel 2007).

Texas contemplated a moratorium on P3s in 2007 and considered building SH 121 through increased gas taxes (Innovative Transportation Solutions 2007, pp. 6-7; see also, Phase II Section V Institutional Capacity). Such a strategy, however, was infeasible because it would have taken 5.9 years to raise the revenue necessary to build the project (Innovative Transportation Solutions 2007, p. 7). The project is set to be a 50-year concession under the design, build, finance, operate, and maintain delivery method (FHWA 2009). North Texas Tolling Authority (NTTA), a public entity that specializes in O&M work on toll roads outbid a private operator, Cintra (Poole Jr. 2007; Samuel 2007; see also Phase I Report #2 & 3, pp. 31-32).

One possible explanation for the discrepancy in value between the two firm's bid is that NTTA can borrow at a lower rate than the private firm Cintra, allowing NTTA to provide an upfront payment that is \$400 million greater than Cintra (Weinstein & Clower 2007, pp. 2-3). Other factors of consideration could have included the competing firms' projected toll increases

and total project risk. Discount rates, which discount revenues/costs in the future based on their levels of risk, can drastically change the attractiveness of a business proposal (Yescombe 2007, pp. 50-51).

Poole discusses how a key issue in deciding whether to invest is the value of cash flows over time (Poole Jr. 2007). Lease payments under the original Cintra bid would have the same priority as operating and maintenance costs and would have required payment prior to debt service and taxes. In contrast, under the NTTA deal, the public sponsor would only pay NTTA after NTTA had paid off operating costs and debt service as well as received its profit (Poole Jr. 2007, p. 3). Accordingly, it is very unlikely that NTTA's projected revenues were more stable/less risky than Cintra's revenues (Poole Jr. 2007, p. 3). NTTA represented an investment risk, but in 2011, Moody's changed its ratings outlook from negative to stable (Moody's 2007). The public authority, NTTA, used a lower discount rate when calculating its future revenues; this assumption increased the value of its proposal (Yescombe 2007, pp. 50-51).

NTTA, which represents the counties of Collin, Dallas, Denton, and Tarrant, has a nine-person governing board. The board includes two directors picked by each of the four counties and one member from an adjacent county whom the Governor appoints (Board of Directors 2011).

Risk Sharing

Although the project underwent some bizarre changes¹ early on, the contract TxDOT formed with NTTA does a good job of protecting the public² from P3 failure. In terms of risk, the contract outlines bond provisions that might interfere with the authority's obligations, and means of dealing with those impediments (TxDOT §19b). Also, TxDOT's liability under the project is limited to the direct cost of correcting latent defects within the project (TxDOT §9c iii-vi). NTTA takes on all environmental risk associated with permits and environmental impacts (TxDOT §8a).

Section 21 in the contract details revenue sharing between NTTA and TxDOT (TxDOT). NTTA, which used aggressive tolling forecasts, is required to establish a reserve account if it defaults on a payment to the public sponsor. In the event of a default, the authority would be required to make monthly payments equal to 1/12 of the projected revenue share amount for that year (TxDOT §21d). If NTTA has not defaulted with respect to revenue share payments for two continuous calendar years, it can refrain from making deposits into the reserve account (TxDOT §21d). This protective clause helps mitigate the risk of project bankruptcy. The contract also attempts to shift public approval risk to NTTA, in that NTTA is responsible for toll collection, violation processing, speed limit determination, etc. (TxDOT §13 c & e).

Responsibility and Accountability

Like the other two contracts, the Sam Rayburn Tollway agreement includes a clause that specifically outlines the relationship between TxDOT and NTTA. By stating that no principal-

¹ Project given to North Texas Tolling Authority less than four months after being awarded to Spanish infrastructure firm Cintra (Williamson, 2007; see also Phase I Reports #2 & # pp. 31-32).

² Public refers to the general population served by TxDOT in this project. NTTA, also a public entity, is in charge of the role normally delegated to a private firm.

agent relationship or joint enterprise is formed, TxDOT assures that it will not be responsible for operator malfeasance/negligence (TxDOT §34). TxDOT and NTTA share responsibilities based on what is a part of the project and what is a frontage road. At its sole cost, TxDOT is responsible for constructing and maintaining all ramps, frontage lanes, and cross streets of the project (TxDOT §7a). The two shall jointly share the responsibility of installing highway reference markers and signage to insure conformity with state highway system regulations (TxDOT §8g). NTTA, which is responsible for the project area, is solely in charge of setting up toll collection systems and video feeds (TxDOT §13f & §22a).

Enforcement and Assurances

The authority must also prepare a schedule for all renewal work projected for the upcoming year, as well as projected costs (TxDOT §8e). These requirements encourage transparency and allow TxDOT to annually assess the authority's performance. This clause is strengthened by §17, which requires the authority to keep all documents related to the project for three years after final payment of construction costs (TxDOT).

Section 22 of the Sam Rayburn contract deals with who, what, and how NTTA can toll (TxDOT). By limiting the authority's ability to toll non-project areas, the department insures that normal state highways will not decrease in efficiency or public benefit (TxDOT §22a. iii). This section also details the maximum annual rates for each user classification (TxDOT §22b. i). The authority may exceed these maximum rates can only if it is necessary to comply with bond provisions, comply with law, or maintain the financial condition of the NTTA system. NTTA can only surpass these maximums if its toll levels for roads not contained within the project are also above the maximum rates (TxDOT §22b. ii).

The Sam Rayburn contract, which is structured to complete the project quickly; it only allows for delays in the case of a force majeure event outside of the authority's control (TxDOT §12). The department also encourages swift action by the authority with §11e, which outlines incentive payments for early delivery and damages for late delivery (TxDOT). Unfortunately, the contract does not mandate that the operator attest to its schedule, therefore this clause is effectively toothless. Despite this lack of enforceability, TxDOT 's dispute resolution system is efficient. Unlike other contracts, the Sam Rayburn contract establishes a system that would significantly reduce review periods rather than wasting time and stalling litigation (TxDOT §8c).

Contingency Planning/Revenue Sharing

Contingency planning, which can play a massive role in a P3's success or failure, is vital to the long-term viability of a project. TxDOT also included two long-term planning clauses within the contract. TxDOT §29 states that the remainder of the contract survives should any particular clause within the contract be removed or deemed illegal. Also, the department did an excellent job protecting the long-term transportation plans of the state. The contract clearly states that any improvements or alterations to the major highways and interstates will not be deemed a competitive facility, while also protecting Texas' ability to act in accordance with its 2030 mobility plan (TxDOT §1).

PR-22 and PR-5

Background

The Commonwealth of Puerto Rico, a US territory, is an island located in the Eastern Caribbean. The recently formed Puerto Rican Public-Private Partnerships Authority³ agreed to lease two of the region's most trafficked roadways to alleviate some of Puerto Rico's congestion and financial problems (Toll Road News 2011; Maldonado 2011). PR-22 and PR-5 are the two major tollways leased as part of a 40-year concession to Goldman Sachs/Abertis (a joint venture) (Toll Road News 2011). PR-22, the 52-mile East/West route across the island contains seven barrier toll points and conducts around 230,000 transactions per day. PR-5, the five-mile North/South connector, has only one tolling point that engages approximately 24,000 transactions per day. Combined, the two account for almost \$90 million annually in gross revenue (Toll Road News 2011).

By leasing the tollways to Goldman Sachs/Abertis, the Puerto Rican government received an upfront fee of \$1.08 billion, as well as \$56 million in accelerated safety improvements (Toll Road News 2011; Maldonado 2011). To minimize transaction costs, which tend to be high in P3 contracts, the contract with Goldman Sachs/Abertis focuses heavily on aligning the conflicting goals of the public and private entity (Rosenau 1999; Vining and Boardman 2008, p. 151).

Risk Sharing

The contract shifts an extensive amount of environmental risk to the private operator. The operator must notify the authority of any preexisting environmental hazards within the first

³ See Phase II Section V Institutional Capacity

three years of the contract, after which it becomes liable for the hazards (Puerto Rico §2.1b).

The firm is required to obey all environmental laws and regulations as well, thereby protecting the public from negative externalities (Puerto Rico §3.2 c). The authority also limits risk by clearly stating that it is not responsible for the accuracy of information contained within documents or studies (Puerto Rico §9.1 k).

Responsibility and Accountability

The Puerto Rico contract clearly defines public/private roles within the project. The concessionaire is solely responsible for all costs and expenses related to toll road operations (Puerto Rico §3.2 b). The toll road operator is explicitly prohibited from entering into agreements that extend beyond the term of the contract and is also required to keep the toll roads open all times (Puerto Rico §3.2 d & §3.2 a). If the concessionaire consistently fails to keep the toll roads open, it will violate §16.1 a. ii and will default (Puerto Rico).

Unlike the other three contracts, the operator is required to pay \$450,000 each year for providing the police force with capital improvements and equipment. Additionally, it makes another \$450,000 payment every seventh anniversary of the project closing date⁴ and both of these payments are adjusted for inflation plus an extra 1.5 percent annually (Puerto Rico §3.16 e. i). The concessionaire can waive these annual payments if it enters an agreement with the Commonwealth Police to provide at least the minimum level of service.

The concessionaire must also obtain insurance equal to the types and amounts required by §13 of the Puerto Rico contract. These amounts are adjusted for inflation every fifth

⁴ The project closing date refers to the date in which the private firm begins operating the tollway.

anniversary after the closing date (Puerto Rico §13.2e). The contract also protects the public sponsor from refinancing that might change the obligations of the firm (Gehrt, Klatt & Beckers 2010, pp. 7-9). Section 17.1 contains the normal restrictions on transfers of concessionaire interest found in the other P3 contracts, although the concessionaire is allowed to change from a limited-liability corporation to a corporation/limited-liability partnership without the approval of the public sponsor (Puerto Rico §17.1 e).

The PR-22/PR-5 contract shifts the risk of contractor/subcontractor negligence to the private operator (Puerto Rico §11.8). The concept of discrimination is also covered in the agreement, with the risk shifting to the private operator (Puerto Rico §11.2 a & §11.3). The authority will not be liable for any discrimination or sexual harassment by contractors or subcontractors of the operator. As required by Article 10 of Act No. 14 of January 8, 2004, P.R. Laws Ann. §930 *et seq.*, to the extent available, the concessionaire will use local labor and goods for the project (Puerto Rico §11.5).

Enforcement and Assurances

The tollroad operator must also maintain at least a 10 percent equity stake at all times, ensuring those in charge have “skin in the game” (Puerto Rico §3.3 a). Possibly to reduce the chance of opportunistic firm behavior, the contract requires that the operator maintain financial data for a minimum of five years (Puerto Rico §11.6 h). The concessionaire is also strictly forbidden from disclosing any confidential information it obtains via this agreement (Puerto Rico §11.6 b).

The contract's main strength is how it protects against interagency conflicts of interest and bribery. Section 9.2 d states that the concessionaire may not engage in any outside agreement that creates a conflict of interest (Puerto Rico). The section requires the firm to immediately notify the concessionaire if it determines an authority employee has a direct economic stake in the project's success (Roach 2011, p. 22; Puerto Rico §9.2 i). The contract also details people/organizations with whom the concessionaire cannot interact. This list includes those who have had their assets frozen, are delinquent on taxes, or have criminal records (Puerto Rico §9.2 f, §9.2 j, and §9.3).

The concessionaire must also attest to not colluding with anyone to be awarded the project or to receive extra benefits from the project (Puerto Rico §11.4). If the concessionaire defaults because of a bribery or collusion allegation, the authority can rescind the agreement, claim damages, and forever suspend the concessionaire from doing business with the authority again (Puerto Rico §11.6). Section 16.6 also protects the authority by rescinding the agreement if the concessionaire commits a public integrity⁵ crime (Puerto Rico).

Contingency Planning/Revenue Sharing

Aside from the aforementioned contingency plans, the contract also contains two clauses found in some of the other P3 contracts. For example, the Sam Rayburn contract also includes a provision similar to §20.5, which explains that the remainder of the contract will remain in effect even if one or more clauses are deemed illegal (Puerto Rico; TxDOT §29). Lastly, the contract protects the right of police, fire, military, and public safety employees to use

⁵ Means any crime described in Section 5(p) of the Code of Ethics, Section 5(n) of Act No. 237 or in other sections of such laws.

the road free-of-charge during emergencies. If an emergency requires evacuations or relocations, the public sponsor, under the direction of the Governor, can suspend tolling with no compensation to the concessionaire (Puerto Rico §3.18).

Comparative Analysis

Risk Sharing

The four contracts effectively shift risk, especially environmental risk, to the private operator. All four contracts require the firm or operator to go through the majority, if not all, of the environmental clearances. The Pocahontas contract contained very little environmental risk though, as the project was close to completion at the time of the lease signing. The SH 121 and Puerto Rico contracts stood because they contained limitations on what can be a preexisting condition and how much time the private firm has to notify the public sponsor of such conditions.

Responsibility/Accountability

The four contracts, Presidio, Pocahontas, Sam Rayburn, and PR-22/PR-5 provide insight into effective P3 structuring. Clauses that appeared in all four contracts were those that clearly defined the relationship between department and operator. All four contracts included sections stating that the respective public sponsors are not responsible for any charges against the operator or its contractors, thereby protecting the public from contractor negligence (Vining and Boardman 2008, p. 158). Also, the contracts define the relationship explicitly, stating that the respective public sponsors are not co-signors to the debt and no joint venture or principal-agent relationships are being formed.

Both the Presidio and Pocahontas contract contain clauses encouraging participation from small, women- and minority-owned businesses, while the PR-22/PR-5 contract encourages the use of local labor and goods. The Presidio contract is the only one that specifically requires prevailing wages, although Texas, Virginia, and the Commonwealth of Puerto Rico are right-to-work states (“Right to work” 2010).

If the private firm operating PR-5 and PR-22 chooses to not pay for the minimum level of police service provided on the tollroads, it will instead be required to provide funding for capital improvements. The Puerto Rico contract contains a clause that requires the firm to provide \$450,000 annually as well as an extra \$450,000 every seventh year for police force capital improvements. These revenue streams are adjusted for inflation and an additional 1.5 percent, providing the public sponsor financial relief.

Enforcement and Assurances

Coupled with these clauses in the Presidio contract is the section that grants the public sponsor 60 percent of any gain from refinancing. By limiting the firm’s incentive to refinance, the department greatly decreases the chance of opportunistic behavior (Gehrt, Klatt & Beckers 2010). This clause protects Caltrans from negative publicity due to opportunistic refinancing by the private entity while also allowing them to share the benefits of any necessary or innovative refinancing (Vining and Boardman 2008, p. 158; Gehrt, Klatt & Beckers 2010).

The Presidio, Pocahontas, and Puerto Rico contracts do a great job of protecting the public sponsor from opportunistic firm behavior. Both the Presidio and Puerto Rico contracts protect the public sponsor from any attempts by the firm to recoup losses due to faulty agency

reports or surveys. The Presidio, Pocahontas, and Puerto Rico contracts require the firm to vouch for its financial models and projections, which protects the public sponsors against asymmetric information. In all four contracts, the Department of Transportation and/or the P3 authority has the right to oversee firm refinancing to insure there are no conflicts of interest or impediments to authority obligations. This oversight helps alleviate the inherent conflicts of interest within the public/private sector objective functions (Vining and Boardman 2008, pp. 152-153; Rosenau 1999, p. 22)

In both the Pocahontas and Presidio contract, if the firm is habitually non-compliant with any of these regulations, the public sponsor has the right to increase enforcement at the firm's expense. Although the Presidio contract includes most key provisions from the Pocahontas and Puerto Rico contracts, it lacks in certain areas. The Pocahontas Parkway contract includes clauses that minimize the chance of gift exchange or bribing between department and operator. The PR-22/PR-5 contract expanded on this clause, adding multiple caveats that protect against collusion, public integrity crimes, and other criminal activity. By helping forge a healthy, conflict-of-interest-free relationship between the two parties, long-term trust and interdependence can be formed (AECOM 2007, p. 75; Brown 2007, p. 324; Lundin 2007 p. 653).

Contingency Planning/Revenue Sharing

The Presidio contract stood out among the others, as it contained copious revenue capturing mechanisms. Caltrans is set to receive a share of cost savings due to changes proposed by either the department or operator. If Section 143(q) the Highway Code changes to

allow tolling, the public sponsor does not have to pay availability payments and captures 80 percent of the toll revenue in excess of the former availability payments.

By creating CPI-adjusted deductibles for drastic changes in O&M or damage due to seismic activity, the department protects against the likely event of an earthquake within the lease period. Although only the Presidio contract contains these deductibles, the Pocahontas contract contains an annual \$50,000 O&M account for the department that is also CPI-adjusted, further protecting the public sponsor.

The Pocahontas contract also included an excellent revenue capturing mechanism that protects the public sponsor. By having the firm agree upon scheduled improvements, the public sponsor can know when to expect changes to the project as well as punish a delay in those changes. By allowing the public sponsor to complete these tasks itself, at the operator's expense (plus a ten percent contingency fee), the contract encourages swift action by the private operator.

The Sam Rayburn Tollway contract, which contained some long-term planning clauses, was noticeably deficient in other areas. The contract failed to verify the financial model of the operator, which could prove to be a problem down the road. The contract did encourage timely and efficient negotiation between the sponsor and operator, however, which is something Caltrans should consider for future contracts. The SH 121 contract's main strength was its first clause, which clearly protects major changes to Texas State Highways in the future. By eliminating the chance of having to pay competitive facility fees for long-term mobility projects, TxDOT thoroughly protected the public's interest.

Based on the case studies and available literature, we have identified ten clauses that constitute an effective means of structuring public-private partnerships. These clauses should be included in any future P3 contracts, as they contribute to a well-defined, well structured, and productive P3. See Table 2 below.

Table 2: Ten clauses that should appear in a P3 Contract

1		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause		§15.5.3.1	§6.06 a	§9c iii-vi	§17.1
Description	Limits on firm refinancing, especially early in contract life	Public sponsor retains 60% of any gain from refinancing, discouraging selling off rights to the lease early	Refinancing notice must include details of any changes to financial model or material changes in operator's obligations	Public sponsor can review contract bond provisions for impediments to obligations	Public sponsor can review refinancing or attempted changes in concessionaire interest and has some authority to veto.
2		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause		§1.3.3 & §3.1.2			§9.1 k
Description	Firm can't cite faulty documents from public sponsor as reason for reimbursement	Drastically limits firm's ability to cite deviations from actual field conditions and those purported in reference documents			Authority not responsible for accuracy of information contained within documents
3		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause		§18.2.10.1	§8.06 e	§11 e	13.3b
Description	Payments for late delivery of project or improvements	Firm must pay \$1,000 per day that the project is late as well as forgo availability payments	If operator fails to complete tasks on time, public sponsor can complete them and operator is on hook for all costs, a 10% contingency fee, procurement costs, plus interest	Incentive payments for early delivery and damages for late delivery of project	After a casualty event the public sponsor can step in and do work at concessionaire's expense. Much more limited than other two clauses
4		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause			§8.12		§9.2d, 9.2i, 11.4, & 11.6d
Description	Deal with conflicts of interest/bribing between department and operator		Deals with ethical standards of the operator and public sponsor. Attempts to deter bribing		Deals with every aspect of bribery, collusion, etc. Concessionaire forfeits all rights to the project if convicted of public integrity crime.
5		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause		§6.8.1	§8.06		
Description	If firm is habitually non-compliant, public sponsor can increase monitoring at firm's expense	If firm is habitually non-compliant, public sponsor can increase monitoring at firm's expense	If operator fails to comply in some way the department can increase monitoring at their expense		
6		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause		§7.2.6, §7.3.2	§11.02 b. vii	§34	§11.8, §9.2d, 9.2i, 11.4, & 11.6d
Description	Shifts risk of contractor negligence from public sponsor to private firm	Contractor negligence shifted to firm along with key provisions the firm must include in its contracts with contractors & subcontractors	Department not responsible for claims against contractors & subcontractors	No principal-agent relationship or joint venture exists between department and operator	Shifts contractor negligence to private firm and applies all restrictions on collusion, bribery, etc as well.
7		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause		§17.1.1	§15.02		§9.2
Description	Firm must attest to the validity of their financial model	Firm must attest to the validity of their financial model	Operator vouches for accuracy of financial model and projections.		Concessionaire vouches for accuracy of their financial model.
8		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause		§7.6.1			
Description	Specifically requires prevailing wage	Requires Prevailing Wage			
9		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause		§9.1.4	§10.02b		§13.2e
Description	CPI Adjustments to protect public sponsor	Seismic deductibles & other revenues adjusted with CPI	Oversight O & M budget of public sponsor is adjusted for inflation		All insurance requirements for the private firm are adjusted for inflation every 5th year.
10		Presidio	Pocahontas	Sam Rayburn	Puerto Rico
Clause		§10.1.3, §10.2.4&5, §11.6, §11.6.3, §15.5.3.1			
Description	Revenue capturing mechanisms for the public sponsor	Allows public sponsor to capture revenue from work changes, refinancing, tolling, etc.			

Conclusion

While it is our opinion that the Presidio development agreement represents a well-written P3 contract, it is lacking in a few areas. Although Presidio shares risk, details accountability, and contains far better contingency plans than the other two projects, it fails to foster trust as well as the other contracts do (Lundin 2007, pp. 653-654). One major fault in the contract is its dispute resolution board (Caltrans §9.1.1.1). The onerous procedures laid out in the Presidio contract will most likely end in non-binding arbitration. The TxDOT contract, which encourages a less bureaucratic approach to dispute resolutions, provides a better means of resolving interagency conflicts.

The Pocahontas and Puerto Rico contracts also deal with gift giving and bribing between operator and sponsor. The Presidio contract failed to incorporate such provisions, although California has strict laws pertaining to bribery (Bribery Law 2011). The Puerto Rico contract, which is an ideal model for discouraging illegal behavior, provides far better protection from conflicts of interest and bribery than the Presidio contract. By eliminating conflicts of interest between parties, the contract promotes a healthy and mutually beneficial relationship (Lundin 2007, pp. 653-654). The effect of the lack of interdependence promoting clauses was evident early on in the project, with the Professional Engineers in California Government already suing the private operator (Carlsen 2011).

Another key point in the Pocahontas and Presidio contracts is their goal of 20 percent participation by small, women- and minority-owned businesses. In a diverse area like Texas, the fact that this clause was not included is startling. These provisions could have alleviated a

lot of negative press; the NTTA serves a predominately minority region, yet all current and previous board members have been white save one African-American male who was replaced in 2010 by a white male (Krause & Lindenberger 2010). Also, almost all of NTTA's contracts are with white, male-headed businesses, although much of the subcontracting work is done by minority-owned businesses (Krause & Lindenberger 2010).

The Presidio contract encourages swift action by the private firm, requiring it forego availability payments as well as compensate the public sponsor for late delivery of the project; however, the Pocahontas contract goes a step further. By allowing the public sponsor to step in and do work if the operator delays, as well as compensating for procurement costs, interest, and contingency fees, the Pocahontas contract protects the public sponsor. The Pocahontas contract also contains a benchmark clause for firm refinancing, allowing the public sponsor to review all financial documents to ensure there are no material changes to operator's obligations. By ensuring the private firm has no conflicts of interest or disincentives to provide the public good, the Pocahontas contract helps protect the long-term viability of the project (Vining and Boardman 2008, pp. 151-154; Rosenau 1999, p. 23).

Section 6.01 a. of the Pocahontas contract states that the private firm is exclusively responsible for project financing and bears the risk of interest rate changes; this protective clause is similar to the weighted average cost of capital clause contained in the Presidio contract. In Presidio, the public sponsor retains 85 percent of any gain or loss from interest rate changes, yet in Pocahontas the private firm retains 100 percent of the cost/benefit.

Public-private partnerships, which continue to evolve as the financing environment around them changes, require numerous safeguards to protect the welfare of the public they serve. The Presidio Parkway contract contained the vast majority of clauses that our case studies and literature review found imperative to long-term P3 success (AECOM 2007, pp. 74-75; Vining and Boardman 2008, pp. 154-156). Despite a few shortcomings, the Presidio Parkway provides an exemplary model for P3 contract structure, and should serve as a building block for future contracts.

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