



# **Dispute Resolution Board Foundation**

**Fostering common sense dispute resolution worldwide**

Publication date: July 21, 2015

## **Recommended Best Practices for Use of Dispute Review Boards (DRBs) on Public Private Partnership Projects in the U.S. and Canada**

### **Introduction**

The Dispute Resolution Board Foundation (DRBF) is a nonprofit organization dedicated to promoting the avoidance and resolution of disputes worldwide. A task force<sup>1</sup> of DRBF members with expertise in public-private partnership projects in the U.S. and Canada — best known as “P3s” — crafted these best-practice recommendations for the use of Dispute Review Boards (DRBs)<sup>2</sup> on P3 projects.

### **The Business Case for DRBs on P3s**

To work most effectively, P3s are structured to share risk and reward between the public partner and the private partners. The P3 structure often integrates all elements of the project into one enterprise: planning, programming, environmental permitting, financing, procurement, design, construction, setting of user fees, operations, maintenance, capital asset replacement and hand back. In addition to the owner-developer agreement, there are major contracts and subcontracts with a design-build contractor, prime subcontractors, an operator and, possibly, a major equipment supplier. There are also agreements with surety companies, insurance companies and others that cover the financial aspects of the P3 project.

A threshold question an owner often asks is whether the owner has less risk of traditional claims for additional time or money on P3 projects. Initially, one might conclude that P3s, from an owner’s liability perspective, are less risky than the traditional design-bid-build (DBB) projects on which DRBs have been used with great success. The reason for this initial conclusion is that under P3 developer agreements much of the traditional design, construction and operational risk<sup>3</sup> of the owner is now passed to the developer. The

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<sup>1</sup> The DRBF task force consisted of Kurt Dettman (chair), Tim Heffernan, Hanna Blake and Sid Scott. An advisory group made up of Ferdi Fourie, Brad Jones, Eric Kahlig, Christine McAnney, Tom Ward, David Hatem, Jim Guyer, Gerald McEniry, Don Marston, David Brown, Martyn Bould, Kristen Stewart, Everett McIndoe, Andy Alvarado, Mohamed Hegab, Charles Juliana, and Joe Seibold assisted the task force. Comments on the paper can be sent to DRBF General Manager Ann McGough at [amcgough@drb.org](mailto:amcgough@drb.org).

<sup>2</sup> A Dispute Board, including the DRB variation, is defined as a board of impartial professionals formed at the beginning of the project to follow construction progress, encourage dispute avoidance, and assist in the resolution of disputes for the duration of the project.

<sup>3</sup> Generally, under the Spearin doctrine, an owner “impliedly” warrants the accuracy and constructability of plans and specifications that it furnishes to a contractor.

developer, in turn, passes that risk downstream to a design-build team, later to prime subcontractors or suppliers, and even later to an operator. Indeed, many P3 agreements explicitly limit the grounds on which the developer can make claims against the owner to fundamental commercial “deal points,” as contrasted with typical DBB project changes and claims provisions (for example, constructability issues, differing site conditions or delay events). Likewise, financial entities “ring fence” their potential liability with agreements that disclaim most delivery and operational risks.

If there is a lower risk of claims against the owner for additional time or money from the developer, does that preclude the need for dispute avoidance and resolution mechanisms like DRBs? Not fully. Although there may be differences in the claim risks to the owner on P3s, as contrasted with DBB projects, there are still fundamental risks of claims that DRBs may prevent or mitigate.

First, although the scope and details of the DRB process may need to be changed to fit the contractual relationships within the P3 structure, the nature of the DRB in preventing and resolving disputes and claims at the project level remains the same. Prevention and resolution of high stakes, fundamental commercial “deal point” claims certainly warrant consideration of the use of DRBs. The DRB works for the P3 project, not individual P3 parties, so important project interests can be dealt with in a neutral forum. Equally important for long-term operational P3s, DRBs can help the parties maintain a relationship of open communication and trust that is imperative to support the “partnership,” which is the foundation of a successful P3.

Second, if one views the P3 as an “enterprise,” claims within other parts of the P3 enterprise can materially affect the outcomes of the project overall. For example, claims within the design-build team could impact the designer’s production of release-for-construction plans or the work of key trade contractors or suppliers. Disputes on the financing side with lenders or equity partners can affect cash flow to pay for aspects of the project. All such claims have a corrosive effect on relationships and impose a frictional cost on project delivery. Even if these claims are not “passed through” to the owner, ultimately they can adversely affect project outcomes.

Third, many times owners are subject to public scrutiny about whether the public’s interests are being protected when what would otherwise be a public project is, in essence, being privatized. The DRB as an expert, neutral panel can provide transparency and justification to the public for decisions that the owner makes on any claims brought by the developer. Likewise, the developer can use DRB reports as the basis for decisions and explanations to its financial lenders, as well as to the design-build team and operator. In a sense, the DRB can provide an “integrity framework” for the project.

Fourth, claims between the owner and developer, focused as they often are on fundamental deal points, can presage default terminations.<sup>4</sup> Defaults on P3 projects have huge implications for the parties, the financial backers and the public. The benefit of having expert, neutral opinions on claims can assist P3 parties from engaging in what is the equivalent of “mutual assured destruction” arising from a contested default termination. Any system that prevents this type of outcome, which will be considered a debacle in the public’s mind, warrants consideration.

## I. Background on Infrastructure Development

### Looking Back

For more than 200 years, private participation in infrastructure development has been a keystone to overall development in many economies, including the U.S and Canada. The private sector has played an important role in the initial development and operation of key infrastructure assets. Examples include early post roads and bridge franchises, passenger railroads, water works and other projects vital to economic growth and prosperity. The public sector played a partnership role in this development by issuing land grants or awarding franchises.

During these early years of P3s, the U.S. government also foresaw the need to directly spend federal funds to build projects considered critical for development of commerce and trade. Examples include river and harbor improvements, the Erie Canal and the National Road, also known as the Cumberland Road connecting Cumberland, Md. to the Ohio River. Such projects also leveraged private sector resources to allow for more development than could have occurred through direct government funding. Many governments at all levels used this two-pronged approach early on to develop infrastructure deemed to be in the public interest.

Priorities shifted in the 1930s toward the development of public works as a national instrument of social and economic policy, accelerating during the Depression years when public works became a means to put the unemployed back to work. The approach

#### U.S. Federal Financing Tools

The U.S. government encourages the use of P3s through innovative financing mechanisms and initiatives designed to provide flexibility in the ways projects are delivered. These tools can augment traditional funding sources and enable agencies to accelerate the completion of projects.

SEP-15 is a new experimental process for the Federal Highway Administration to identify for trial evaluation new P3 approaches to project delivery.

Private Activity Bonds refer to a new type of financing that provides private developers and operators with access to the tax-exempt bond market, lowering the cost of capital significantly.

The Transportation Infrastructure Finance and Innovation Act (TIFIA) credit program is designed to fill market gaps and leverage substantial private co-investment by providing supplemental and subordinate capital.

The benefits associated with these tools are not mutually exclusive, and there is potential synergy in combining tools on a single project.

<sup>4</sup> Developer agreements often include both owner default and developer default provisions, so default claims can run in both directions.

continued for military purposes during World War II and later for development of the Interstate Highway System in the 1950s, a massive undertaking financed and constructed almost entirely with federal funds.

## **Moving Forward**

Since 1991, the pendulum has swung back toward private sector participation in public works. Enactment of the 1991 Intermodal Surface Transportation Act allowed for federal participation in pilot projects using innovative delivery and private sector financing. The federal government also developed a financing program to provide more funding flexibility and access to credit markets at a lower cost of capital<sup>5</sup>.

In response to funding shortfalls, several state and local governments re-engaged the private sector in development, management and finance for highway, transit, water and other infrastructure projects. In the early 1990s Dulles Greenway in Virginia and state Route 91 in California were among the first new toll road projects involving entirely private financing. The latter resulted from California's Assembly Bill 680 authorizing demonstration franchises. Subsequently, states enacted broad legislation authorizing P3 projects.

Canada also began to experiment with P3 projects including the Highway 407 Express Toll Route and the Confederation Bridge.

From the early 1990s to the present, P3 deals closed in the U.S. and Canada have grown significantly. Types of P3s have ranged from greenfield design-build-finance-operate projects to brownfield leases of existing assets.

Some P3 projects from the early 1990s did not meet expectations for the P3 partners because market conditions or financial, construction or operational risks were not carefully considered. Several of these deals did not achieve sufficient revenue to meet the debt service, resulting in financial distress that included Chapter 11 bankruptcy, in some cases, or in investors overpaying for the assets.

Bankruptcy filings by the Las Vegas Monorail Company, South Bay Expressway, L.P. and Connector 2000 Association have tested the commercial structures used in public-private partnerships in the U.S. With the South Bay Expressway, which is part of State Route 125 in California, some have concluded that both the bankruptcy filing and the subordination of the mechanic's lien might have been avoided by careful drafting of change orders and lien waivers as well as by using dispute resolution provisions that could have resulted in earlier identification and resolution of disputes.<sup>6</sup>

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<sup>5</sup> Federal Highway Administration (FHWA) Office of Innovative Delivery, [http://www.fhwa.dot.gov/ipd/project\\_delivery/defined/fhwa\\_delivery\\_process.aspx](http://www.fhwa.dot.gov/ipd/project_delivery/defined/fhwa_delivery_process.aspx).

<sup>6</sup> See "US P3 Bankruptcy Cases Raise Structuring Considerations" by George K. Miller in the Nov. 17, 2010 edition of *InfraAmericas*.

Additionally, political barriers, negative public perceptions related to user fees and protracted procurements to get to a financial close challenged the P3 deals. The challenges are partly due to the public's general perception, particularly in the U.S., that public infrastructure assets are "paid for" and should not be subject to additional fees or

controlled by the private sector. Other factors were lack of public agency experience with procuring long-term integrated services contracts and internal reluctance to relinquish control of these assets.

Despite these hurdles, P3s remain a key delivery tool for public sector programs that are widely underfunded. In fiscal year 2012, 42 states in the U.S. had budget shortfalls totaling \$103 billion. A shortfall totaling \$54 billion across 30 states was forecast for FY 2014 and beyond, and 46 states have been forced to cut services and 30 have raised taxes.

### **General Description of P3s in the U.S. and Canada**

According to The National Council for Public-Private Partnerships<sup>7</sup>, a P3 is generally defined as:

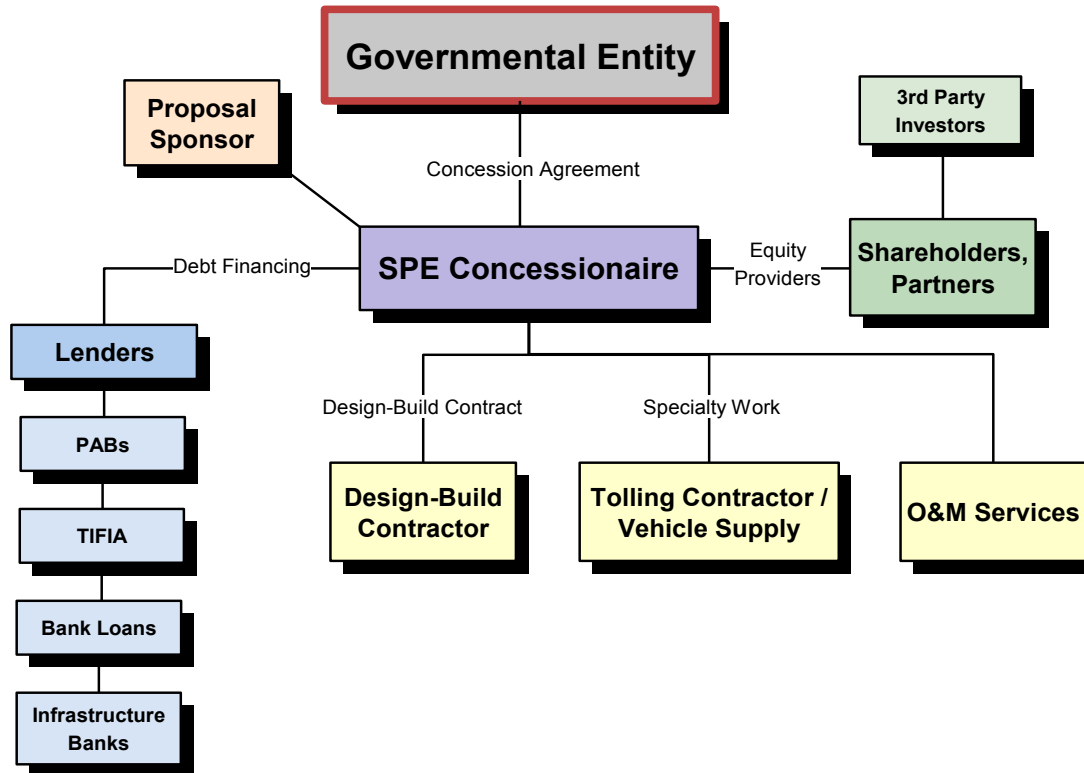
*"A contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility."*

A P3 organizational structure may include many parties depending on the size and complexity of the project. The structure shown in Figure 1 is typical for large infrastructure toll facilities requiring specialized finance, design, construction and operations and maintenance.

The Special Purpose Entity (SPE) is the developer or concessionaire that may enter into agreements with design-build and operations and maintenance (O&M) partners. The SPE also may draw upon a variety of financing options, including private lenders (banks) and equity sponsors (shareholders, partners) or upon federal tax-exempt debt financing through private activity bonds (PABs) or credit-assistance tools such as Transportation Infrastructure Finance and Innovation Act (TIFIA) loans. For smaller P3 projects (for example, local agencies and social infrastructure) the SPE developer may include construction and O&M functions within the developer's organization.

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<sup>7</sup> See The National Council for Public-Private Partnerships at [www.ncppp.org](http://www.ncppp.org).



**Figure 1. Typical P3 Organizational Structure for a Large Complex Infrastructure Facility.** “SPE” stands for Special Purpose Entity, and “O&M” refers to operations and maintenance. PAB is Private Activity Bonds. TIFIA is Transportation Infrastructure Finance and Innovation Act. *Source:* “Global Construction Contracts and PPP in Their Infancy,” by Shelly Ewald, Global Construction & Infrastructure Legal Alliance, May 2014.

### P3 Projects in the U.S.

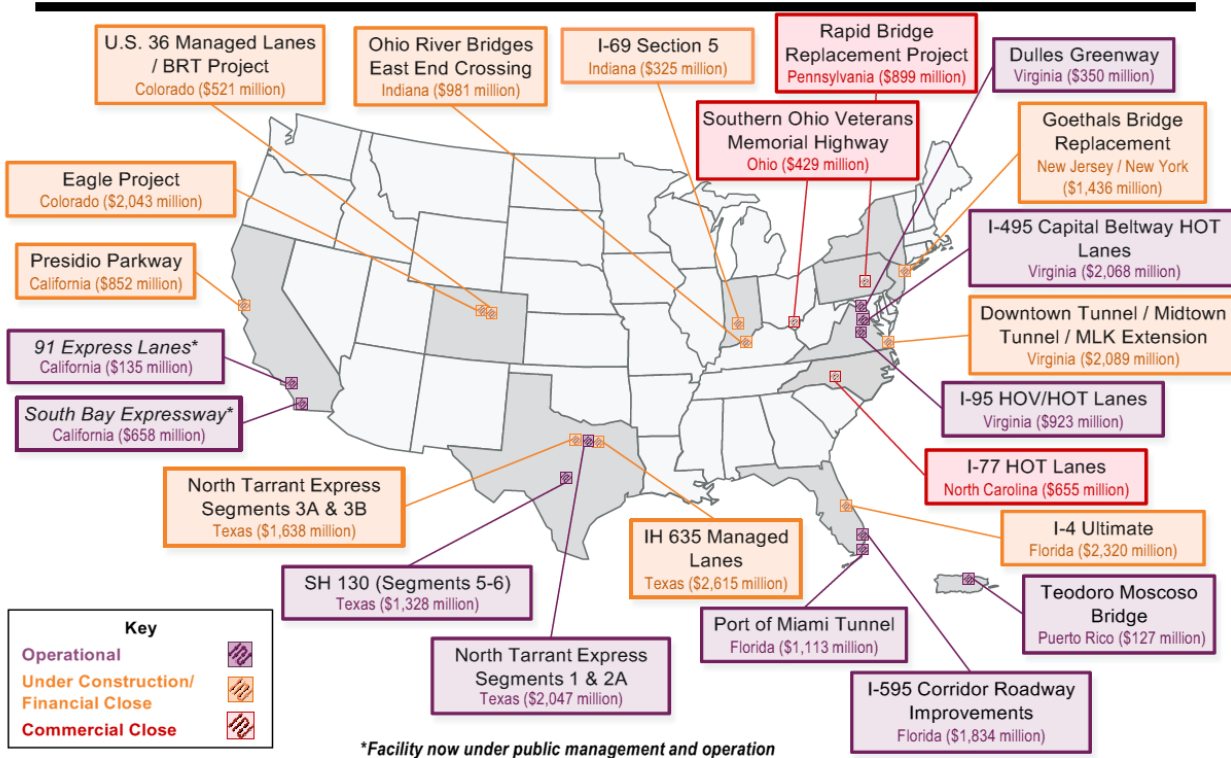
P3 projects in the U.S. have ranged from large highway infrastructure facilities involving new roadways and bridges to a packaged or bundled series of smaller projects, as with the Pennsylvania Department of Transportation. Such P3s in the U.S. also include tolled managed lanes on existing roadways and existing bridge widening or reconstruction projects.

Figure 2 shows the current status of major P3 highway and transit projects closed in the U.S. as reported by the Federal Highway Administration.

The initial highway P3s in the U.S. (Pocahontas Parkway in Virginia and State Highway 130 in Texas) were primarily structured as revenue-generating toll facilities with the private partner assuming the toll-revenue risk. More recently, however, transportation owners in the U.S. have transitioned to “availability payment” models for both tolled and non-tolled facilities to retain the financial and revenue risk during operations, and thus attract more bidders.



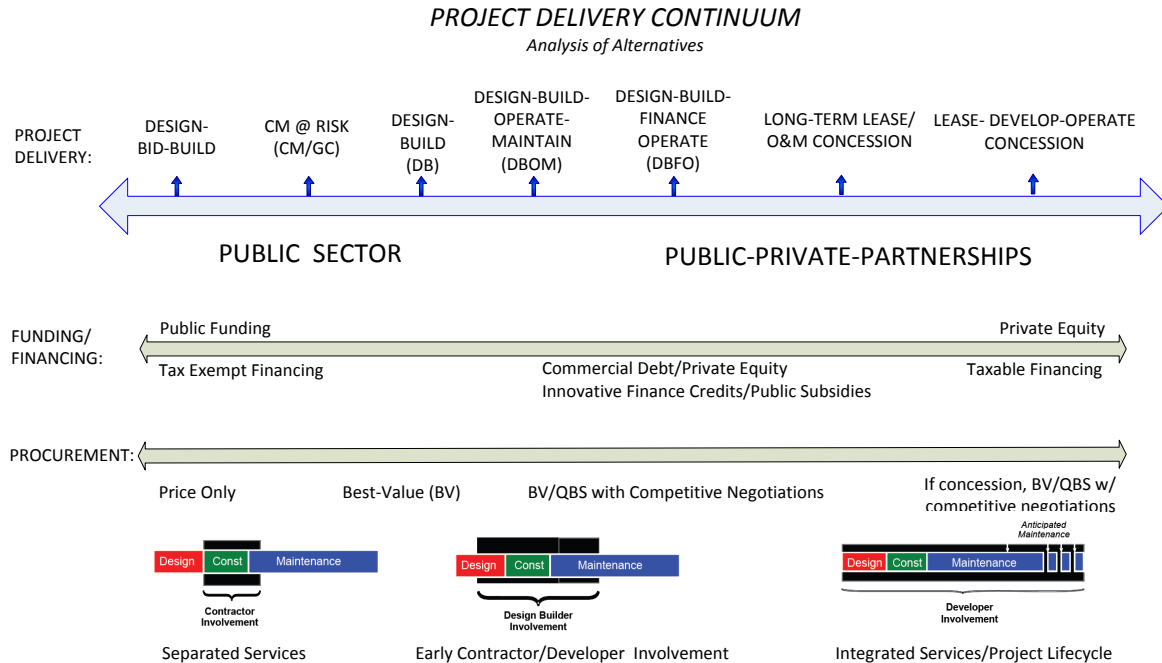
## P3 Concessions in the U.S. – New Build Facilities



**Figure 2. Summary of Current Major P3 Highway/Transit Projects.** Source: Federal Highway Administration 2015.

In addition to highway and transit facilities, many other infrastructure sectors in the U.S. are planning to use P3s in their capital programs. These include airports and port facilities and “social” infrastructure such as water/wastewater, energy, residential and commercial real estate development, as well as public education facilities, courthouses and hospitals. Notable major projects recently closed or in the planning stages are the Luis Munoz Airport in San Juan, Puerto Rico, the LaGuardia Airport terminal redevelopment in New York and the Purple Line light-rail system in Maryland.

P3s in the U.S. have used a variety of approaches to project financing and delivery. As shown in Figure 3, P3 projects have ranged from design-build-finance-operate to long-term lease or concession agreements. The funding may include a mix of innovative public sector financing in the form of credits or subsidies and/or commercial debt and private sector equity. Depending on the project, the financing model may be based on the project generating income through user fees or tolls where the private sector assumes the revenue risk. More recently, P3s in the U.S have moved to an availability payment model similar to P3s in Canada, explained in the next section, where the public entity retains the revenue risk.



**Figure 3. Project Delivery Continuum in the U.S.** Source: “Risks & Advantages on P3 Projects,” by Sid Scott, American Bar Association Division 4, Project Delivery Systems, March 2014.

### P3 Projects in Canada

In addition to the U.S, there are several mature P3 markets around the world, including Canada, Australia and the U.K. What tends to distinguish these programs outside of the U.S. is that P3 activity is conducted through comprehensive government programs rather than on a one-off basis common to the U.S.

Canada has a more significant track record in P3 project delivery. As reported by the Canadian Council for Public Private Partnerships (CCPPP), the country now has more than 220 P3 projects, with those reaching financial close valued at more than \$70 billion, far beyond the level achieved in the U.S. Canada has developed considerable expertise in P3s, both domestically and internationally, and increasingly such projects reflect coordinated programs within provinces. The country’s projects include the high-profile Confederation Bridge and Highway 407 Electronic Toll Route as well as many P3s at the province level.

As noted on the CCCPP website<sup>8</sup>, project types are diverse. They include education, energy, water, hospitals and health care, IT infrastructure, criminal justice facilities, real estate, highways/bridges, transit/rail and airport facilities. The market sectors with the most experience in P3 delivery in Canada are health care and transportation. A major P3 international bridge crossing between Windsor, Ontario and Detroit, Mich. is currently in the early planning stages.

<sup>8</sup> See <http://projects.pppcouncil.ca/ccppp/src/public/search-project?pageid=3d067bedfe2f4677470dd6ccf64d05ed>.



The availability payment model is the predominant financial approach in Canada. Availability payments compensate the private sector for its responsibility to design, construct, operate and/or maintain a facility for a set period of time. A public sponsor makes these periodic payments based on particular project milestones or facility performance standards.

In contrast to a P3 tolled highway facility or commercial development where the private sector may assume the revenue risk, the public sponsor retains the revenue risk through availability payments. In return, the private sector must meet performance standards for construction delivery and then for operations for the duration of the agreement.

P3 contracts in Canada are considered performance based, and the public sponsor can withhold payment until an asset is built to correct standards. Strict penalties can also be imposed for poor performance during the operations and maintenance period.

Given the rapid growth of P3s in Canada and the U.S., as well as the long-term risk implications and variety of financing and delivery models, the need to develop disputes policies and systems that adapt to varying project scenarios is vital.

## **II. Evaluation of DRB Use in Current P3 Projects in the U.S. and Canada**

To ascertain the current use of DRBs on P3s and assist in the development of recommended best practices, the DRBF task force analyzed a broad cross-section of P3s in the U.S. As reflected in Attachment A, there are more than 45 contractual P3 agreements spread across 15 states in the U.S. and Puerto Rico. There is also a project in Ontario, Canada.

U.S. geographic regions span from New York and Pennsylvania down through Maryland, Virginia, North Carolina and Florida in the East; Ohio, Missouri, Indiana and Illinois in the Midwest; Texas, Nevada and Arizona in the Southwest; and Colorado to California in the West.

P3 projects reviewed include airport, highway, tunnel and bridge, and light rail/monorail construction. The size, scope and breadth of the projects vary considerably. The goal of the task force was to be as inclusive of large, complex P3s as possible. Time constraints and public access to contractual documents limited development of Attachment A but still provided a reasonable “snapshot” of DRB usage on U.S. P3 projects.

As reflected in Attachment A, the types of P3 project documents reviewed include:

1. RFQs
2. RFPs
3. Comprehensive Development Agreements
4. Predevelopment Agreements
5. Concession Agreements
6. Lease Agreements

7. Design-Build Contracts
8. Franchise Agreements
9. Use Agreements
10. Capital Maintenance Agreements
11. Others Variants

For each project agreement, the task force identified whether a DRB is contractually required, the type of DRB board utilized, and if no DRB is used, whether the P3 agreement envisioned another dispute resolution method.

The types of DRBs reflected in the projects are:

1. Conventional DRBs
2. Multiple DRBs
3. Technical Panels
4. Other Variants

A common DRB type called for in the P3 agreements obtained by the task force was the conventional DRB. These DRBs consist of a three-member board appointed at the beginning of the project to address a wide array of disputes occurring throughout the project. Features of the DRB typically include regular project visits and/or written updates by the board. The DRB is most often available for advisory opinions, conducts dispute hearings and issues non-binding findings and recommendations.

Another prevalent DRB type used for P3 agreements is the multiple DRB. This model operates like a conventional DRB except that the scope and/or subject-matter jurisdiction is compartmentalized. Separate DRBs may be empaneled to address disputes over financial matters, technical requirements or other topics. For example, two Florida P3 contracts, the Interstate Highway 595 and Port of Miami projects, provided for three separate DRBs: one for disputes regarding “final acceptance” and latent defects arising after final acceptance for work performed before final acceptance, another for disputes regarding latent defects not within the scope of other DRBs and a third for disputes regarding performance of value-added specifications.

Some P3 contracts the task force reviewed only provided for the use of a DRB for disputes about technical requirements, and the technical panel would be used on an ad-hoc basis as disputes arose.

Other variants reviewed included a model used by the Texas Department of Transportation that may be best described as a “Dispute Adjudication Board.” The Texas model operates as a formal arbitration process with a broad scope of review to address project disputes. This board hears disputes and issues written findings of fact, conclusions of law and decisions. The process and procedures of this board are typically set forth in a separate Dispute Board agreement appended to the contract.

The results of the review process confirm that P3 projects are complicated contracts that differ significantly from project to project and from place to place. One common theme from the P3s reviewed is that the DRB almost exclusively applies only to the relationship between the owner and developer and its jurisdiction extends only to owner-developer claims. Thus, whatever its scope (technical, financial, etc.), the DRB does not deal with claims within the design-build team or claims involving other project participants such as financial lenders, insurance companies or sureties. Moreover, the contractual documentation demonstrates, not surprisingly, that the U.S. marketplace suffers from a lack of uniform terms and conditions for design-build-operate agreements and concessions.

Despite the growing attention given to P3s in the U.S., available data on the experience of using DRBs on P3s is sparse. This partly stems from the fact that infrastructure P3s are long-term arrangements and most have only been implemented in the U.S. in the last decade. Consequently, so few projects in the U.S. have completed their life cycle that any forensic evaluation is naturally limited.

For example, Virginia has had a P3 program in transportation since 1995, but not until 2010 did the commonwealth create a distinct P3 unit, the Office of Transportation Public-Private Partnerships (OTP3), within state government.

Virginia is one of only a handful of states to have established a dedicated P3 unit. The purpose of the OTP3 is to develop, implement and administer state P3 projects across all agencies in the commonwealth. Of the seven P3 transportation projects in Virginia evaluated, five of the 15 contractual agreements obtained featured a requirement for use of a Dispute Board. Two of the five called for technical Dispute Boards (the Tunnel/MLK Extension Project and the Route 460 Corridor Improvement Project). The other three agreements incorporated conventional DRBs.

The contracts requiring a technical Dispute Board involved comprehensive agreements and called for the parties to submit disputes to a "Steering Committee." For technical issues, the parties could utilize a "Technical Requirements Dispute Panel." These agreements are dated after the creation of OTP3 and may reflect a growing willingness and awareness on the part of this dedicated P3 unit to take a forward-thinking, comprehensive approach to dispute resolution.

### **III. Claim Risk Profile/Dispute Systems Design for P3 Projects**

To assess the utility of using DRBs and the best type of DRB to use, the development of a Claim Risk Profile<sup>9</sup> is helpful.

The scope of this paper does not assess the relative merit of P3 structures or contract forms; rather, the task force offers questions that should be answered in evaluating the types of claims that may arise across the P3 project structure and among the parties

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<sup>9</sup> See K. Dettman and S. Scott, "Using a Claim Risk Profile to Determine DRB Usage on Projects," DRBF Forum, Vol. 19, Issue 1 (April/May 2015).

involved. Below is a list of questions to help organizations assess the type, frequency and size of potential claims that may arise under P3 contractual arrangements.

## **Claim Risk Profile Checklist for P3 Projects**

### 1. Owner-Developer Interface

#### a. Design/Construction Phase

##### i. Allocation of Risk

1. Right-of-Way (ROW) Responsibility
2. Utility Relocation Responsibility
3. Design Responsibility - prescriptive or performance based
4. Differing Site Conditions
5. Engineering or Technical Challenges
6. Permitting Risk - initial and compliance
7. Third-Party Commitments
8. Payment Basis - availability or financed

##### ii. Management Structure

1. Integrated Teams
2. Dispute Avoidance and Resolution Process

#### b. Operations Phase

##### i. Allocation of Risk - comprehensive or selective

1. Warranty
2. Performance Criteria
3. Revenue Risk

##### ii. Management Structure

1. New Team
2. Dispute Avoidance and Resolution Process

#### c. Developer and Design-Build Team Interface: Design/Construction Phase

##### i. Allocation of Risk

1. ROW Responsibility
2. Utility Relocation Responsibility
3. Design Responsibility - prescriptive or performance based
4. Differing Site Conditions
5. Engineering or Technical Challenges
6. Permitting Risk
7. Payment Basis - availability or financed

##### ii. Management Structure

1. Integrated Teams
  - a. Owner/Developer
  - b. Design-Build Team Designer/Trades/Suppliers
2. Dispute Avoidance and Resolution Process

## 2. Design-Build Team Internal Interfaces: Design/Construction Phase

- a. Allocation of Risk
  - i. Design Responsibility - prescriptive or performance based
  - ii. Differing Site Conditions
  - iii. Engineering or Technical Challenges
  - iv. Permitting Risk
  - v. Standard of Care
  - vi. Payment Basis - availability or financed
  - vii. Terms and Conditions
    - 1. Designer/Engineer
    - 2. Trades
    - 3. Suppliers
  - viii. Management Structure
    - 1. Integrated Teams
    - 2. Dispute Avoidance and Resolution Process
  - ix. Insurance/Surety Program

## 3. Developer-Lender Interface

- a. Allocation of Risk
  - i. Project Costs
  - ii. Financing Costs
  - iii. Developer or Design-Build Team - equity in deal?
- b. Management Structure
  - i. Oversight Role
  - ii. Management Role
  - iii. Approval Role
  - iv. Ability to Call Loans

## 4. Developer-Operator Interface

- i. Allocation of Risk - comprehensive or selective
  - 1. Warranty
  - 2. Performance Criteria
  - 3. Revenue Risk
- ii. Management Structure
  - 1. New Team
  - 2. Dispute Avoidance and Resolution Process

When completed, the P3 Claim Risk Profile will catalog the type, frequency, size and project impact of claims that could arise on the project. Another important consideration is what players would be involved in each of the types of claims and in each phase of the project.

In the next step, as the dispute system is designed, each P3 project team assesses the alternatives for dispute prevention and claim resolution. For this white paper, the task force assumes that the DRB process has been selected for the project, but the exact contours of the process have not been worked out.

#### **IV. Recommended Best Practices for Use of DRBs on P3 Projects**

##### **Characteristics of Successful P3s**

Successful P3s result from a variety of factors, but the most important ones are properly shared risk and reward, coupled with management systems to implement that sharing arrangement.

Two key elements of P3 management systems are, first, for potential disputes, having in place a process for preventing issues from becoming disputes, and, second, for disputes, having in place a “real-time” resolution process at the project level.

As to dispute prevention, P3s are long-term relationships that may cover many years from procurement and design to construction, operation and hand back. Consequently, the P3 system of shared risk and reward requires constant application and adjustment as the project is implemented over phases. A complicating factor is the diverse set of players — including third-party stakeholders — that require constant attention to make sure that everyone is “pulling in the same direction.”

As to dispute resolution, P3s represent extremely complex commercial and technical undertakings that will have literally thousands of requirements, substantive and procedural, within a forest of interlocking legal agreements.

These agreements apply to all aspects of the project for its duration, and it is important to prevent conflicting interpretations from destroying successful project execution. An equilibrium needs to exist between maintaining long-term relationships while still meeting contractual, technical and financial objectives of the project.

Inevitably, disputes will arise that need to be resolved. Those who have managed complex long-term projects understand that claims have a corrosive effect on project execution and outcomes. In addition to necessitating the allocation of resources for claims activities, they can sour relationships and lead to financial losses for one or more parties.

A final complicating factor for any long-term P3 project is that the players and types of disputes will change, necessitating a dispute resolution system that can adapt to the changing phases and players of the P3 life cycle.

## **Conventional DRBs (U.S. Model)**

The DRB model used primarily in the U.S. and Canada consists of three members appointed at the beginning of a project. Some users on smaller projects are using Dispute Resolution Advisors who function as single-person DRBs.

DRB members have extensive experience in construction projects and claim-resolution processes and often are selected for particular expertise in the type of project at hand. DRB members are required to be neutral, disclosing potential or actual conflicts of interest and committing to remain neutral and conflicts-free for the duration of the project. The DRBF recommends the parties jointly select the three DRB members to ensure confidence in the DRB's expertise and neutrality.

After appointment, the DRB becomes familiar with the project and attends an "all hands" kickoff meeting to meet the players and start establishing a working relationship with the main parties. Thereafter, the DRB is kept abreast of project developments with regular paper updates or access to the project's information-sharing website.

The DRB periodically returns to the project site for meetings with the parties to get project updates, discuss issues or challenges, identify emerging disputes and continue building relationships with the parties. This regular interaction with the parties and monitoring of project events focuses on preventing issues from becoming disputes.

DRBF best practices also recommend that the DRB be available to give the parties advisory opinions. Advisory opinions typically are used for smaller, discrete disputes that the parties would like to resolve by agreement, but with advice from the DRB. The advisory opinion process is usually conducted at regular DRB site visits, is informal and results in a verbal opinion that the parties can use as they wish to resolve the issue. If there is no resolution, the parties can proceed, without prejudice, through the DRB hearing process.

In the conventional DRB model, if formal disputes are brought forward, the DRB manages the process leading to a hearing and non-binding recommendation. The disputes are brought in "real time," that is, while the project is underway and after going through whatever notice, filing and review process is stipulated in the contract documents.

The DRB holds an organized, but relatively informal hearing at which the parties present the dispute and defenses using project personnel to explain the circumstances and relying on contract documents for information. After the hearing, the DRB issues detailed findings and recommendations on the dispute, giving the parties the benefit of the DRB members' project knowledge and their collective analysis of the relative merits of the parties' positions.

The parties can then accept or reject the DRB's recommendation or, as is often the case, use it as the basis for further negotiations to resolve it. Typically, project contracts prescribe subsequent legal processes such as arbitration or litigation for disputes not resolved by the DRB process.

## **Discussion and Analysis of DRBs in Relation to P3 “Friction Points”**

For this section of recommended best practices, the analysis assumes P3 projects will use the conventional DRB model used in the U.S. and Canada. In the same vein, where Dispute Resolution Advisors (DRA) are an option for P3 project elements or interfaces, the DRBF’s recommendations also assume use of the U.S./Canada DRA model.<sup>10</sup>

This analysis is framed in terms of the contractual interfaces, or “friction points,” between the parties making up a P3 enterprise.

### ***Friction Point One: Owner-Developer Interface***

With the owner-developer relationship, there are typically fewer but more fundamental “deal point” claims. Though in the usual P3 most of the project-delivery risk (and associated control) is allocated to the developer, there are still contractual issues that remain between the owner and developer, especially regarding environmental permitting and compliance issues, utility relocation and right-of-way acquisition, force majeure events and issues that require owner input or approval on design decisions and performance requirements.

Deal-point claims could involve basic commercial terms such as: whether and to what extent certain types of risk were transferred to the developer (for example, performance requirements), whether force majeure or “change in law” events have triggered a right to renegotiate (for example, a legislative change that constrains the use of a facility or imposes unexpected additional taxes) and whether certain assumptions that the parties made turn out to be fundamentally incorrect (for example, traffic demand and corresponding revenue<sup>11</sup>, or lack thereof, from competing facilities).

Whatever its character, however, a claim is a claim. Having a DRB available to assist the parties in resolving deal-point claims can be helpful in preserving the working relationship and keeping the commercial deal on track, especially when the relationship between the owner and the developer can span decades.

Given the different claim profiles of owner-developer interfaces, however, there are aspects of the character and role of the DRB that warrant consideration.

First, since owner-developer claims will not necessarily be grounded in the day-to-day work on the project, the DRB could be made up of members with different skill sets than the typical engineering and construction management-centric DRB. Law and financial

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<sup>10</sup> There are other DRA models. See P. Caldwell and K. Dettman, “The Hong Kong Dispute Resolution Advisor: An Alternative to Conventional Dispute Review Boards?” DRBF Forum (November 2011).

<sup>11</sup> For example, the operator of the South Bay Expressway filed for bankruptcy in 2010 due, in part, to lower than anticipated traffic volume caused by the recession, which adversely impacted its ability to pay debt service on the project. A more recent example is the \$2 billion High Occupancy Toll lanes P3 on the Capital Beltway that opened in November 2012. Usage estimates made before the recession were 66,000 daily trips, on average. Actual daily trips have averaged 37,574 as of October 2013, which has resulted in a restructuring of the financing.



expertise are important skills to be considered, which are somewhat different than those required by conventional DRBs.

Second, given the potentially decades-long P3 relationship, the owner and developer will have to consider having one DRB for the construction phase and a second DRB (perhaps with new members) for the operational phase, as different types of claims will arise during these project phases depending on shifting responsibilities and rights of the parties.

### ***Friction Point Two: Developer and Design-Build Team***

This interface focuses on the contractual allocation of risk between the developer and design-build team. Under the typical P3 design-build contract, the developer will try to mirror its design-build obligations and risks under the agreement with the owner, passing along the design, constructability and delivery risks to its design-build team.

Claims between the developer and design-build team may involve deal points akin to those between the developer and owner, to the extent that those risks are handed down to the design-build team. More detailed claims issues between the developer and design-build team can also occur regarding any limitation of liability that the design-build team may have negotiated, as well as any integration and coordination risk for meeting design and performance criteria and for facility start-up and turn over. Typically, the design-build contractor also will own traditional claims exposure for delay, disruption, extra work, differing site conditions, etc., arising from construction of the project.

Avoidance and resolution of these claims becomes even more important when the developer has guaranteed the owner a price and schedule for delivery of the project. There are usually liquidated damages for late delivery where untimely opening of the project impacting revenue operations may result in financial penalties owed to both the owner and financial lenders. Ultimately, the developer and its lenders are looking to the design-build team to resolve issues so that the developer and its lenders will meet their economic goals, as well as deliver the quality product that the owner (and the public) expects and requires.

The same DRB considerations as those relating to developer-owner claims would apply to this interface. Presumably this DRB would be in existence only during the design and construction phase of the P3 project, but this DRB also could be used with commissioning/start-up issues and warranty issues during any warranty period given by the design-build contractor.

### ***Friction Point Three: Design-Build Team (Internal)***

The third friction point lies within the design-build team. Contractual relationships among the general contractor, designer/engineer, trade contractors and suppliers cover the actual construction and delivery of the project. This contractual interface encompasses the more typical claims that arise from construction and delivery: design issues, extra work, constructability, delay, interference/disruption, etc.

Here, the DRB model that has worked well on many large civil projects to prevent and resolve disputes can be used, especially since issues within the design-build team will need to be resolved in real time as work is underway and money is being spent.

This is the conventional DRB. Formed at the beginning of the project and comprised of engineers/construction managers/construction lawyers, the DRB would conduct regular site visits and use an informal “real time” hearing process.

#### ***Friction Point Four: Developer-Operator***

Often on P3s, the developer will have a separate contract with the operator (separate, that is, from the contract with the design-build team). Issues usually revolve around meeting requirements for operational performance, operations and maintenance, capital asset replacement and hand back at the end of the concession period.

This interface will raise some of the same considerations as the developer and design-build team relationship. Although the character of the potential claims may be different (operations vs. construction), avoidance and resolution of claims is still in the parties’ best interests. There also may be integration and coordination related to work performed by the design-build team that may have carry-over implications for disputes in the operational phase.

In the operational phase, the composition of the DRB would need to be calibrated to the character of the claims (operations vs. construction). The degree of involvement could be less because of the lower frequency of claims that typically arise out of routine operations and maintenance operations and asset maintenance/replacement requirements. Because of this usual lower frequency of claims, the DRB could be an “on-call” DRB similar to the Dispute Resolution Advisor model used by the California Department of Transportation (Caltrans).<sup>12</sup>

#### ***Friction Point Five: Developer-Financial/Insurance Interface***

A fundamental linchpin of P3s is private sector financing and risk management. Typically, myriad interlocking financing mechanisms support project costs and are backstopped by insurance and surety programs to manage financial risk. Claims relate to the impact of performance issues on the budget for the project. For example, if cost overruns occur with construction, where will the money come from to pay for them? A less likely, but still possible claim, may be developer-financier disputes over compensation or allocation of costs not recoverable from the owner or the design-build team. Finally, there may be insurable losses that result in disputes with insurance companies or trade-contractor defaults that result in surety claims.

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<sup>12</sup> Under the Caltrans model, a Dispute Resolution Advisor is appointed at the beginning of a project, is given basic information about the project and then is on-call, as needed, to review and give his/her non-binding findings and recommendation on disputes.

All of these claims can impact project performance. Therefore, having a neutral DRB to assess and make recommendations on claims can produce an important ameliorative effect on the progress of the P3 project. As with the operations phase, the frequency and impact of these claims may not be as much of a factor as traditional project delivery claims, so the composition and character of the DRB may need to be adjusted accordingly.

## **Structural Options for P3 DRBs**

### ***Separate DRBs for Interface Friction Points***

If one concludes that each friction point discussed above could benefit from the dispute avoidance and resolution functions of a DRB, then setting up the DRBs deserves consideration. As noted, composition, duration and the role of the DRB would be tailored to the interface claim risk profile, which suggests the predictable type, size and frequency of potential claims.

Another option is to implement DRBs only for friction points where the parties agree that the additional carrying costs of the DRBs are justified.

### ***Different DRBs for Different Types of Disputes***

DRBs also can be organized around the subject matter of disputes. As noted previously, research found that some projects are establishing “Technical” DRBs and “Financial” DRBs, for example. The theory seems to be that these DRBs bring special subject-matter expertise to disputes, so their jurisdictions are separated accordingly.

Typically, these subject-matter DRBs deal only with disputes between the owner and developer, so one question is whether the DRBs would cover more of the contractual relationships than just the owner-developer friction point. Another challenging issue is how to delineate the jurisdictions of subject-matter DRBs when many disputes on P3 projects involve intertwined technical and financial issues. If different types of DRBs are used on the same project, careful thought needs to be given to the delineation of jurisdictions.

The task force also found that the on-call technical panels and Dispute Boards used on P3 projects in Texas do not meet the dispute-prevention needs of the P3 project involved. Use of these types of processes, the task force concluded, may be useful for “one-off” disputes but are not recommended from a programmatic standpoint.

### ***Omnibus P3 DRB***

Although separate DRBs for each friction point or subject matter is feasible, it presents challenges in implementation: justifying additional cost for several DRBs, additional coordination to tailor each DRB to the applicable contractual relationships and the potential for different results from different DRBs on the same project.

One way to address these challenges is to use an “Omnibus” DRB to handle all issues arising on the P3 project, with costs being shared on a pro-rata basis depending on the user of the process. Thus, if the owner and developer did not feel the need for periodic site visits given the limited types of claims that could be brought against the developer via the design-build team agreements, the design-build team — which presumably would like periodic site visits for the typical claims that occur within the design-build team — could pay for the periodic visits.

Likewise, if there were a dispute only between the developer and the owner, those parties would pay for the hearing on that claim. Although more complex to administer than the typical DRB, this flexible approach is much less costly than the possibility of multiple claim paths and potential arbitrations or litigations within sub-groups of the P3 enterprise.

In addition to saving on transactional costs, the omnibus DRB offers a holistic view of the entire project, allowing it to take applicable P3 relationships and requirements into account. This increases the likelihood of uniformity and consistency in the DRB’s findings and recommendations across contractual friction points.

Given the broader scope of potential issues on P3s compared to other types of projects, the composition of this type of DRB may include members from a variety of backgrounds, such as finance, construction and legal. A variation on this theme is to appoint a three-person DRB from mixed backgrounds but to have a standby pool of potential DRB members with more focused subject-matter expertise. A further variation on this theme is to permit the DRB to retain, with party approval, subject-matter experts to assist the DRB if it had to deal with technical issues arising from one of the subsidiary contractual interfaces.

### ***Selection of DRB Members***

One topic that deserves attention is how a P3 DRB is selected. Since there are at least four or five primary parties on most P3s, the project may benefit from having a pre-selected pool of designated, qualified DRB chairs and members who all parties have had a voice in choosing.

The DRB pool can be used to establish the omnibus DRB and be available to draw from if additional DRB expertise is needed on a particular dispute. Careful consideration needs to be given to the following: the mix of the prequalified DRB pool, how DRB members are selected (and replaced) and how the DRB pool is kept apprised of (and to the extent necessary, involved in) the P3 project, so as to be prepared to provide dispute prevention and resolution services.

Furthermore, the parties would select and use DRBs by joint agreement and consensus, rather than by a selection process that has each party appointing one member and the third being selected by the first two DRB members.

## Applying Best Practices to Two P3 Types

There are many variants of P3s, but for this paper, the task force applied its recommendations to two basic P3 types:

**Design, Build, Finance, Transfer (DBFT):** With this approach, responsibilities for financing, designing and building the project rest with the private sector developer. The developer will engage and provide financing for a design-build team to design and deliver the P3 infrastructure, which is then transferred to the owner for operations and maintenance. With DBFT, the developer will provide private financing for design and construction, and the owner will compensate the developer based on an agreed-upon payment schedule during, and in some cases, after the infrastructure is transferred. Private financing may be supplemented by public sector grants or future federal funds.

**Design, Build, Finance, Transfer, Operate, Maintain (DBFOM):** In this scenario, responsibilities for designing, building, financing and operating are all bundled together and transferred to a private sector developer or Special Purpose Entity. The developer typically engages and provides financing for a design-build team to design and deliver the P3 infrastructure and engages an operator to operate and maintain the facility, with hand back to the owner after a set period of time. DBFOM is either partly or wholly financed by debt-leveraging revenue streams dedicated to the project. The private partners will make equity investments as well. Direct user fees (such as tolls) are the most common revenue source. Future revenues are leveraged to issue bonds or other debt to provide funds for capital and project-development costs. Availability payments have also been used in this capacity where the owner retains the revenue risk and compensates the developer based on performance during the operations and maintenance period. Often the financing is supplemented by public sector grants or in-kind contributions, such as right-of-way.

### *Recommended DRB Use by P3 Type*

#### 1. Design, Build, Finance, Transfer

##### a. Conventional DRB

- i. Appointed at Beginning of Project
- ii. Joint Selection of all Three Members
- iii. Coordinated with Partnering Program
- iv. Periodic Meetings
- v. Periodic Updates
- vi. Advisory Opinion Option
- vii. Real-Time Hearing Process
- viii. Non-binding Recommendations
- ix. Admissible in Court
- x. Other Alternative Dispute Resolution Options Available Post-Recommendation

b. Jurisdiction Over

- i. Disputes between Owners and Developers, Developers and Design-Build Teams
  1. Conventional DRB Terms
    - a. Owner/Developer/DBT Joint Selection
    - b. Owner/Developer/DBT Management of DRB Process
    - c. Owner/Developer/DBT Normal Carrying Costs Split Three Ways
- ii. Disputes within Design-Build Team (DBT)
  1. DRB Nominations - DBT team members would participate in initial DRB selection process by giving input to DRB on DRB nominees
  2. Pass-Through Claims - DBT members would participate through design-build contractor
  3. Internal DBT claims - DBT would bring claims to DRB. Owner can observe, and the process is not binding on owner. Cost of internal DBT disputes split 50-50 between design-build contractor and team member involved
- iii. Owner/Developer and Financial Lenders/Insurers/Sureties
  1. Conventional DRB Terms
    - a. Owner/Developer/DBT Joint Selection
    - b. Owner/Developer/DBT Management of DRB Process
    - c. Owner/Developer/DBT Split Costs Three Ways
  2. Financial Lenders/Insurers/Sureties participate in initial DRB selection process by giving input to owner and developer on DRB nominees
  3. DRB would be available to deal with disputes involving Financial Lenders/Insurers/Sureties but would be on-call only
  4. Disputes involving Financial Lenders/Insurers/Sureties - costs of such disputes would be split proportionally among parties involved; other involved parties can observe the process but would not be bound by DRB recommendations on disputes not involving them from a liability standpoint
  5. Insurers and Sureties, with party agreement, would have the right to use the DRB process (on call) for insurance and surety disputes, with costs shared proportionally

2. Design, Build, Finance, Operate, Maintain

- a. Design and Construction Phase - standing DRB for DBT P3 as described above
- b. Design and Construction Phase
  - i. Owner-Developer - conventional DRB management and cost sharing arrangements
  - ii. Developer and Design-Build Team - same management and cost sharing arrangements as internal DBT process noted above

- iii. Design-Build Team - same management and cost-sharing arrangements as Internal DBT process noted above
  - iv. Developer-Financial Lenders/Insurers/Sureties - same management and cost-sharing arrangements as noted above, except that DRB would be on call only as relates to developer-lender or insurance issues/disputes/claims
- c. Operations Phase
- i. Standing DRB
  - ii. Design/construction phase DRB converts to on call at “substantial completion” and stays in place until end of commissioning
  - iii. Joint Selection of DRB - can be rollover of first DRB or new DRB
  - iv. Initial Meeting
  - v. Periodic Meetings Annually
  - vi. Periodic Updates Quarterly
  - vii. Advisory Opinion Option
  - viii. On Call - for dispute resolution but real-time approach preferred
  - ix. Non-binding Recommendations
  - x. Admissible in Court
  - xi. Other Alternative Dispute Resolution Options Available Post-Recommendation

## **Conclusion**

Given the long-term partnership nature of most P3s in the U.S. and Canada, the DRBF task force recommends the omnibus DRB described in this paper. Although challenges exist in having all P3 parties participate in this approach, major benefits are that dispute prevention and resolution mechanisms are embedded in the “friction point” contract terms, and the omnibus DRB provides a knowledgeable, holistic view of the project and disputes.

The task force advocates consolidating the patchwork quilt of uncoordinated and sometimes contradictory dispute mechanisms into the cohesive, life-cycle approach of an omnibus DRB. This framework supports the fundamental objectives of the P3 project to safely deliver a quality product that meets the financial and operational goals of the parties involved, and to do so with the fewest and shortest disputes possible along the way.

## **About the DRBF**

*The Dispute Resolution Board Foundation is a non-profit organization dedicated to promoting the avoidance and resolution of disputes worldwide using the unique and proven Dispute Board method. For more information, visit [www.drb.org](http://www.drb.org) or send an email to [info@drb.org](mailto:info@drb.org).*

**Private-Public Partnership Contracts,  
Dispute Resolution Analysis**

| State      | P3 Legislation? | Project Name           | Document Type                              | Document Date | DR Board Required? | Type of DRB Process | If No DRB, Alternative DR Method? | Comments   |
|------------|-----------------|------------------------|--|---------------|--------------------|---------------------|-----------------------------------|--|
| Arizona    | YES             | South Mountain Freeway | RFQ  | 10/1/14       | No                 |                     | No                                |  |
| California | YES             | Presidio Parkway       | RFP / Concession Agreement No. 04-1637U4   | 12/1/10       | Yes                | Conventional        |                                   |  |
| Colorado   | YES             | Denver Eagle           | Concession and Lease Agreement No. 18FH012 | 7/9/10        | Yes                | Multiple            |                                   | <ul style="list-style-type: none"> <li>Disputes of a technical nature reviewed by a technical panel</li> <li>Disputes of a financial nature reviewed by a financial panel</li> </ul>   |
| Colorado   | YES             | Northwest Parkway      | Concession and Lease Agreement             | 8/29/07       | No                 |                     | Mediation/Arbitration             |  |
| Colorado   | YES             | U.S. 36                | Concession Agreement                       | 2/25/14       | TBD                |                     | TBD                               | <ul style="list-style-type: none"> <li>Dispute resolution procedure set forth in separate Schedule 24 - document not yet obtained for review</li> </ul>  |
| Florida    | YES             | I-595                  | Concession Agreement No. E4J69             | 3/3/09        | Yes                | Multiple            |                                   | <ul style="list-style-type: none"> <li>Dispute Resolution Board (DRB) for disputes regarding "Final Acceptance" and latent defects arising after Final Acceptance regarding work performed prior to Final Acceptance</li> <li>Regional DRB for disputes arising after Final Acceptance (not within scope of general DRB)</li> <li>Statewide DRB for disputes re performance of value added specification requirements</li> <li>DRB review is condition precedent to litigation</li> <li>DRB recommendation is not binding, but admissible as evidence in subsequent proceedings</li> </ul> |



**Private-Public Partnership Contracts,  
Dispute Resolution Analysis**

| State    | P3 Legislation? | Project Name   | Document Type                         | Document Date | DR Board Required? | Type of DRB Process | If No DRB, Alternative DR Method? | Comments  |
|----------|-----------------|----------------|---------------------------------------|---------------|--------------------|---------------------|-----------------------------------|---|
| Florida  | YES             | Port of Miami  | Concession Agreement No. 06/07-6084DS | undated       | Yes                | Multiple            |                                   | <ul style="list-style-type: none"> <li>• DRB for disputes re Final Acceptance and latent defects arising after Final Acceptance re work performed prior to Final Acceptance</li> <li>• Regional DRB for disputes arising after Final Acceptance (not within scope of general DRB)</li> <li>• Statewide DRB for disputes re performance of value added specification requirements</li> <li>• DRB review is condition precedent to litigation</li> <li>• DRB recommendation is not binding, but admissible as evidence in subsequent proceedings</li> </ul> |
| Illinois | YES             | Chicago Skyway | Concession and Lease Agreement        | 10/27/04      | No                 |                     | Mediation/Arbitration             |   |

**Private-Public Partnership Contracts,  
Dispute Resolution Analysis**

| State          | P3 Legislation? | Project Name                      | Document Type                           | Document Date | DR Board Required? | Type of DRB Process | If No DRB, Alternative DR Method?                | Comments   |
|----------------|-----------------|-----------------------------------|---|---------------|--------------------|---------------------|--|--|
| Indiana        | YES             | Indiana Toll Road                 | Concession and Lease Agreement          | 4/12/06       | No                 |                     | Mediation/Arbitration                            |  |
| Maryland       | YES             | Purple Line                       | RFP                                     | 7/28/14       | Yes                | Multiple            |  | <ul style="list-style-type: none"> <li>Designation of two DRBs: technical, financial</li> <li>DRB decisions not binding</li> <li>Use of DRB not mandatory</li> <li>Referral of matter to DRB does not waive contract requirements to file timely notice of claim</li> </ul>  |
| Missouri       | YES             | Safe and Sound Bridge Improvement | RFP Project No. J5B0800 (draft)         | 11/29/08      | Yes                | Conventional        |  | <ul style="list-style-type: none"> <li>In addition to disputes, the commission may submit claims to DRB at any time</li> <li>DRB initial decision is final if neither party files an exception within 30 days</li> <li>Contractor waives right to litigation or arbitration if it fails to file exceptions to DRB's initial decision</li> </ul>  |
| Nevada         | YES             | Las Vegas Monorail                | Franchise Agreement                     | 12/2/98       | No                 |                     | NO   |  |
| New York       | NO              | Tappan Zee Hudson River Crossing  | Design-Build Agreement                  | 11/21/12      | No                 |                     | YES, multi-faceted administrative review process | <ul style="list-style-type: none"> <li>Formal DRB not required, but as part of dispute resolution procedures, the executive director is required to seek advice of an "advisory committee" consisting of the commissioner or duly-appointed designee, N.Y. division administrator of the Federal Highway Admin. or duly-appointed designee, and a member of the construction industry</li> </ul> |
| North Carolina | YES             | I-77 Hot Lanes                    | Comprehensive Agreement                 | 6/26/14       | No                 |                     | Mediation  |  |
| North Carolina | YES             | Mid-Currituck Bridge              | Pre-Development Agreement No. 6.049002T | 4/29/09       | Yes                | Conventional        |  | <ul style="list-style-type: none"> <li>DRB provides non-binding written findings and recommendations in accordance with N.C. Dept. of Transportation standard specifications for roads and structures</li> <li>Parties must exhaust resolution through escalation process defined in formal partnering process prior to escalating an issue to the DRB</li> </ul>                                |
| Ohio           | YES             | Portsmouth Bypass                 | RFP                                     | 8/11/14       | Yes                | Multiple            |  | <ul style="list-style-type: none"> <li>Use of technical and financial DRBs</li> </ul>  |

**Private-Public Partnership Contracts,  
Dispute Resolution Analysis**

| State        | P3 Legislation? | Project Name             | Document Type                                       | Document Date | DR Board Required? | Type of DRB Process        | If No DRB, Alternative DR Method? | Comments  |
|--------------|-----------------|--------------------------|---|---------------|--------------------|----------------------------|-----------------------------------|---|
| Pennsylvania | YES             | Rapid Bridge Replacement | Public-Private Transportation Partnership Agreement | 1/8/15        | Yes                | Multiple                   |                                   | • Use of technical and financial DRBs                       |
| Puerto Rico  | YES             | Escuelas de Primera      | Build and Conservation Agreement (Draft)            | undated       | No                 |                            | No                                |   |
| Puerto Rico  | YES             | Luis Munoz Airport       | Lease Agreement                                     | 7/5/12        | No                 |                            | Mediation/Arbitration             |   |
| Puerto Rico  | YES             | P.R. Highways 22, 5      | Concession Agreement No. 2011-000188                | 6/27/11       | No                 |                            | Mediation/Arbitration             |   |
| Texas        | YES             | DFW Connector            | Capital Maintenance Agreement                       | 10/6/09       | Yes                | Dispute Adjudication Board |                                   | • Separate "Dispute Board Agreement" executed with contract |
| Texas        | YES             | DFW Connector            | Comprehensive Development Agreement                 | 10/6/09       | Yes                | Dispute Adjudication Board |                                   | • Separate "Dispute Board Agreement" executed with contract |
| Texas        | YES             | Horseshoe                | Capital Maintenance Agreement (Draft)               | 7/3/12        | No                 |                            | Mediation                         |   |
| Texas        | YES             | Horseshoe                | Design-Build Agreement (Draft)                      | 7/3/12        | No                 |                            | Mediation                         |   |
| Texas        | YES             | I-635                    | Comprehensive Development Agreement                 | 9/4/09        | Yes                | Dispute Adjudication Board |                                   | • "Dispute Board Agreement" is exhibit to contract          |

**Private-Public Partnership Contracts,  
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| State    | P3 Legislation? | Project Name                             | Document Type                               | Document Date | DR Board Required? | Type of DRB Process        | If No DRB, Alternative DR Method? | Comments  |
|----------|-----------------|--|---|---------------|--------------------|----------------------------|-----------------------------------|---|
| Texas    | YES             | Loop 375 - Border Highway West Extension | Comprehensive Development Agreement (Draft) | 2/18/14       | Yes                | Dispute Adjudication Board |                                   | <ul style="list-style-type: none"> <li>Separate "Dispute Board Agreement" executed along with contract</li> </ul>   |
| Texas    | YES             | North Tarrant Express Facility           | Comprehensive Development Agreement         | 6/23/09       | Yes                | Dispute Adjudication Board |                                   | <ul style="list-style-type: none"> <li>"Dispute Board Agreement" is exhibit to contract</li> </ul>  |
| Texas    | YES             | State Highway 9 (Grand Parkway)          | Capital Maintenance Agreement               | 3/22/13       | Yes                | Dispute Adjudication Board |                                   | <ul style="list-style-type: none"> <li>Separate "Dispute Board Agreement" executed along with contract</li> </ul>   |
| Texas    | YES             | State Highway 99 (Grand Parkway)         | Development Agreement                       | 3/22/13       | Yes                | Dispute Adjudication Board |                                   | <ul style="list-style-type: none"> <li>Separate "Dispute Board Agreement" executed along with contract</li> </ul>   |
| Texas    | YES             | State Highway 130, Segments 5, 6         | Facility Concession Agreement               | 3/22/07       | Yes                | Dispute Adjudication Board |                                   | <ul style="list-style-type: none"> <li>Separate "Dispute Board Agreement" executed along with contract</li> </ul>   |
| Virginia | YES             | Coalfields Expressway                    | Comprehensive Agreement                     | 1/22/02       | Yes                | Conventional               |                                   | <ul style="list-style-type: none"> <li>Agreement refers to disputes procedure in design-build contract, which calls for DRB</li> </ul>  |
| Virginia | YES             | Coalfields Expressway                    | Design-Build Contract                       | 1/22/02       | Yes                | Conventional               |                                   | <ul style="list-style-type: none"> <li>DRB meets quarterly, or at most monthly, as determined by either department or contractor</li> </ul>   |
| Virginia | YES             | Dulles Corridor Metrorail                | Amended Design-Build Contract               | 7/25/08       | No                 |                            | Mediation                         |   |
| Virginia | YES             | Dulles Corridor Metrorail                | Comprehensive Agreement                     | 6/11/04       | Yes                | Conventional               |                                   | <ul style="list-style-type: none"> <li>DRB assists in resolution of disputes arising out of phase 1 development work and phase 1 and 2 preliminary engineering work</li> <li>Parties may execute supplemental agreement if they mutually agree to use DRB for phase 2 development work</li> </ul> |

**Private-Public Partnership Contracts,  
Dispute Resolution Analysis**

| State    | P3 Legislation? | Project Name                              | Document Type                            | Document Date | DR Board Required? | Type of DRB Process | If No DRB, Alternative DR Method? | Comments  |
|----------|-----------------|---|--|---------------|--------------------|---------------------|-----------------------------------|---|
| Virginia | YES             | Dulles Corridor Metrorail - Phase 2       | Design-Build Contract                    | 5/14/13       | No                 |                     | Mediation                         |   |
| Virginia | YES             | Dulles Greenway                           | Comprehensive Agreement                  | 9/27/93       | No                 |                     | No                                |   |
| Virginia | YES             | I-95 HOV/HOT Lanes                        | Comprehensive Agreement                  | 7/31/12       | No                 |                     | Mediation (not mandatory)         | <ul style="list-style-type: none"> <li>• Either party has the right to submit a dispute to a steering committee for resolution</li> </ul>   |
| Virginia | YES             | I-95 HOV/HOT Lanes                        | Design Build Contract (draft)            | 7/31/12       | No                 |                     | Arbitration                       |   |
| Virginia | YES             | I-95 HOV/HOT Lanes                        | Operating and Support Services Agreement | 7/31/12       | No                 |                     | Mediation (not mandatory)         |   |
| Virginia | YES             | I-495 HOT Lanes                           | Amended Comprehensive Agreement          | 12/19/07      | No                 |                     | Mediation (not mandatory)         |   |
| Virginia | YES             | I-495 HOT Lanes                           | Design-Build Contract                    | 12/18/07      | No                 |                     | Arbitration                       |   |
| Virginia | YES             | Tunnel/MLK Extension                      | Comprehensive Agreement                  | 12/5/11       | Yes                | Technical           |                                   | <ul style="list-style-type: none"> <li>• Parties may submit disputes to a steering committee</li> <li>• Disputes involving technical requirements may be submitted to a Technical Requirements Dispute Panel</li> </ul> |
| Virginia | YES             | Route 895 Connection - Pocahontas Parkway | Design-Build Contract                    | 6/3/98        | No                 |                     | No                                |   |
| Virginia | YES             | Route 895 Connection - Pocahontas Parkway | Amended Comprehensive Agreement          | 6/29/06       | No                 |                     | Mediation (not mandatory)         |   |

**Private-Public Partnership Contracts,  
Dispute Resolution Analysis**

| State                     | P3 Legislation? | Project Name                   | Document Type   | Document Date | DR Board Required? | Type of DRB Process | If No DRB, Alternative DR Method?                                 | Comments  |
|---------------------------|-----------------|--------------------------------|---|---------------|--------------------|---------------------|---|---|
| Virginia                  | YES             | Route 460 Corridor Improvement | Comprehensive Agreement                               | 12/20/12      | Yes                | Technical           |   | <ul style="list-style-type: none"> <li>Parties may submit disputes to a steering committee</li> <li>Disputes involving technical requirements may be submitted to a Technical Requirements Dispute Panel</li> </ul> |
| <b>Canada</b>             |                 |                                |   |               |                    |                     |   |   |
| Province                  | P3 Legislation? | Project Name                   | Document Type   | Document Date | DR Board Required? | Type of DRB Process | If No DRB, Alternative DR Method?                                 | Comments  |
| Ontario                   | YES             | Waterloo Stage 1 Light Rail    | Project Agreement (excerpt)                           | undated       | No                 |                     | Yes, multi-faceted review process and arbitration (not mandatory) | <ul style="list-style-type: none"> <li>Provides for review by independent certifier, appointed "expert" and/or single adjudicator prior to arbitration or litigation</li> </ul>                                     |
| <b>Industry Templates</b> |                 |                                |   |               |                    |                     |   |   |
| State                     | P3 Legislation? | Project Name                   | Document Type   | Document Date | DR Board Required? | Type of DRB Process | If No DRB, Alternative DR Method?                                 | Comments  |
| n/a                       | n/a             | Sample Contract Documents      | Public-Private Partnership Agreement No. EJCDC P3-508 | undated       | No                 |                     | Mediation   |   |