

## It's Time for More DRBs in Canada

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A Dispute Resolution Board <sup>[1]</sup>, or DRB, is a form of alternate dispute resolution (ADR) that allows for “real time” prevention or resolution of disputes. DRBs are certainly not new but experience over the last twenty years has proven them to be highly successful, relatively inexpensive and the only proactive form of ADR which promotes the avoidance of disputes.

The use of DRBs has gained in popularity in the United States to the point that their use is common practice in many U.S. jurisdictions, especially state transportation departments. DRBs are also becoming increasingly popular internationally; they have been adopted by the International Chamber of Commerce (ICC) and are used in conjunction with FIDIC contracts. In contrast, DRBs are still quite rare in Canada and many construction industry practitioners remain unfamiliar with the process.

Over the years, Revay and Associates Limited has been involved in several DRBs and has gained some insight into the process. In our continuing effort to keep our Canadian readers abreast of this experience, this report reviews Dispute Resolution Boards, explains the DRB process, and provides some rare examples of how DRBs are used in Canada.

As with any form of ADR, there may be advantages and disadvantages which will be perceived differently by owners, contractors, attorneys and consultants. This article is intended to educate readers on the DRB process and in so doing perhaps encourage the more widespread use of DRBs in Canada. The DRB process is particularly suited for the large infrastructure projects (roads, bridges, tunnels, subways, water treatment plants) as well as mega hospitals, research or convention centers, etc. currently being developed by governments and the private sector.

### Alternate Dispute Resolution in Canada

Despite efforts over the years to introduce alternate dispute resolution techniques such as arbitration and mediation into construction contracts, Canadian contractors and owners are still frustrated with the time and associated expense required to resolve construction disputes.

Once thought to be a potential panacea for our industry, construction players are often disappointed with arbitration. Our experience confirms that arbitration can be more expensive and time consuming than litigation, with equally uncertain outcomes.

The construction community's initial attraction to arbitration was based upon

perceived benefits related to the superior construction knowledge of the arbitrators selected by each party, anticipated speed of the process, expected lower cost, and the less formal nature of the proceedings. However anyone recently involved in an arbitration, particularly involving a three person panel, has experienced the frustration involved when rules of evidence and procedure are imposed, transforming the process into one that can be just as complicated and time consuming as litigation. These arbitrations are often prolonged, resulting in much greater costs than initially expected. In contrast, arbitrations involving a single arbitrator are often more flexible, efficient and less expensive.

Mediation was also touted as a solution. While it certainly is less expensive and less time consuming than arbitration, its success depends to a large extent on a skilled mediator, realistic expectations and the willingness of the parties to compromise. Parties to a construction dispute are known to develop strong positions and neither party may be willing to compromise. Parties often expect the mediators will make the other side see reason and change its position. Certain mediators may choose not to evaluate the details, but simply jockey from caucus to caucus asking each side to either increase its offer or decrease its demands. Construction players need an experienced and authoritative mediator to inform them of the strengths and weak-

nesses of their position. Certain mediators are willing to do this, others are not.

Perhaps the biggest disappointment is that mediation and arbitration are rarely initiated during the course of a construction project, despite contract provisions promoting such. Although Canadian Construction Contract Document CCDC-2 (Article 8.2) and Guide Document CCDC-40 require ADR procedures be initiated within 10 working days after a dispute becomes official, more often than not these procedures are put off until the end of the project. As such, “real time” dispute resolution procedures are not employed; rather disputes are allowed to fester into protracted and extensive confrontations to be settled at the end of a project. More often than not, mediation becomes either a last attempt to resolve the dispute before it proceeds to arbitration or litigation, or an exercise to evaluate the strength of the other side’s position. It works in cases when the parties recognize the expense of litigation or arbitration and the associated uncertainty of the outcome.

Partnering was also thought to be a potential solution and was embraced early by certain public organizations such as Defense Construction Canada. Although partnering has provided an initial collaborative environment to manage a project, this collaborative atmosphere does not always survive the test of the first major dispute. Moreover, certain of these projects suffer from a lack of ongoing monitoring and renewal of the partnering process. As such, although it is a positive step, partnering alone has not had as significant an impact as originally thought in the prevention and resolution of disputes. It lacks an independent, neutral, experienced third party.

Although DRBs are grouped by some under the family of ADR techniques, proponents of DRBs argue that the DRB process is more than alternate dispute resolution because it functions as a vehicle to avoid disputes in the first place rather than simply resolve them.

DRBs can provide a valuable complement to the above methods because they are practical, foster a common sense approach and allow for “real time” dispute resolution during the course of the construction. Figure 1 compares the

timeframe for the resolution of disputes by DRB with other forms of dispute resolution.

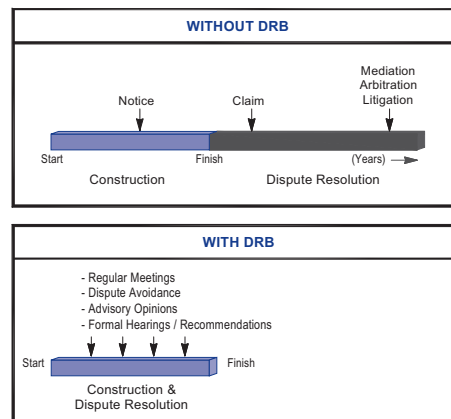


Figure 1 – Timeframe for dispute resolution under typical contracts vs. contracts subject to DRB

Considering their proactive nature, reported rate of success and inexpensive approach to preventing and resolving construction disputes, it is our opinion that the use of DRBs merits serious consideration by the Canadian construction industry.

## What Are DRBs?

A DRB typically consists of a panel of three respected and impartial professionals, who are experienced in the specific type of construction at hand. Both parties select a board member with each party retaining a right of veto, a third member who will chair the panel is jointly selected by the parties. In this way, any apprehension one party might have over the presence and impartiality of a board member is eliminated.

The objective of the DRB is to review disputes as they arise rather than waiting until the end of the project when disputes become much more difficult and expensive to resolve as positions harden and costs escalate.

A DRB achieves this objective by having the board members participate in periodic (monthly or quarterly) site meetings and site visits during the course of the project. The DRB process promotes good relations between the owner and contractor which in turn helps prevent disputes. The panelists’ experience allows them to detect potential problems early in the process and suggest means to avoid these problems becoming serious disputes. Should disputes nevertheless

arise, the panelists provide suggestions and advisory opinions on entitlement and ways to mitigate damages. These advisory opinions can be offered verbally either during a regularly scheduled progress meeting or after an ad hoc hearing. Most problems can be resolved in this context although some problems evolve into claims requiring a formal DRB hearing.

These hearings are conducted to resemble a business meeting rather than a judicial hearing. A formal DRB hearing does not entail prior discovery; instead each side presents a fully documented position paper prior to the hearing. For complex cases, written responses to the position paper may also be in order prior to the actual hearing. The chairperson of the DRB typically controls the meeting by asking questions of the witnesses. Direct and cross examination by lawyers and the making of motions, objections or arguments are not part of the hearing process. In fact, lawyers are at times instructed to be seen but not heard. Following the hearing, the DRB provides a written recommendation. Typically, the DRB will rule only on entitlement issues and let the parties negotiate the quantum on the assumption that they are best positioned to do so.

More often than not, the DRB’s recommendation is an invaluable aid to the parties since it is based on the board members’ specific experience with that type of construction as well as their familiarity with the project. In effect, the DRB acts as a sounding board.

DRBs are often used on large projects involving technically difficult engineering designs and employing state of the art technologies. Although DRBs originated on tunnel and transportation projects (linear construction), the techniques used by DRBs are increasingly being adopted by the building industry for “vertical construction” especially by universities and research centers.

DRBs are not new; in fact, after years of success resolving construction disputes, the DRB Foundation (DRBF) was established in 1996 to meet the growing demand for information and training. The DRBF’s mission is to “Foster Common Sense Dispute Resolution Worldwide”, the key words obviously being “common sense”, something often lacking when it

comes to resolving construction disputes. Such an approach seems to have struck a chord with many construction practitioners.

The DRBF has kept a database on cases from 1985 to 2005. The number of cases has grown steadily to over 1,300 projects in 2005 with a value of over \$100 billion. The average size of the projects was about \$70 million.

More specific data can be found on the DRBF website<sup>[2]</sup> and a recent publication by Manessa and Mora<sup>[19]</sup>. It is estimated that by 2010, about 2,000 projects will have used the DRB process.

## DRBs in the United States

The DRBF stopped keeping detailed statistics because of the dramatic increase in the number of cases. More than 100 new DRBs may be formed annually in the United States.

The mere presence of a DRB often serves as a deterrent to submitting false or weak disputes. In fact, approximately 58% of the projects remain dispute free; in other words, no formal hearings were required of the DRB. The success rate of DRBs is often quoted at 98%, which represents the percentage of projects completed without resorting to subsequent arbitration or litigation.

### Infrastructure Projects

DRBs are best known for their use on large, complex infrastructure projects. They were first developed for underground construction and more particularly for tunnel construction, where subsurface conditions may vary significantly, frequently leading to disputes. The use of DRBs in conjunction with Geotechnical Baseline Reports (GBRs) is standard practice for tunnel projects allowing a more equitable sharing of risk between the parties and reducing the number of complex disputes going to court. Many contractors in this industry will not even bid on projects which do not involve a DRB.

Other infrastructure projects using DRBs include bridges, roads and rail transportation. In fact, the State Highway departments of more than a dozen states including California, Florida, Massachusetts, Washington and Virginia are the largest users of DRBs.

The Florida Department of Transportation (FDOT) provides an exemplary use of DRBs. Almost every project in excess of \$15 million includes a sitting DRB. Projects of lesser value have access to what is called a Regional DRB. As many as 30 DRBs start annually in Florida alone, a total of over 600 since 1994, on projects worth over US\$10 billion. Of the more than 220 disputes that were heard only five were not settled with the help of the DRB, a 98% success rate. The FDOT website<sup>[3]</sup> provides a detailed description of its DRB operating procedure, a roster of DRB candidates, and actual DRB recommendations.

DRBs are also used by public transit authorities in at least 12 U.S. cities, as well as various governmental agencies for airport expansion projects, hydro-electric dams, ports and mines.

### Vertical Construction

The use of DRBs is also increasing on vertical construction (i.e. building projects). About 10% of the projects in the DRBF database involve vertical construction. Some examples include:

- Universities: in California, Ohio and Washington on various projects including research facilities, libraries, medical buildings and stadiums
- Municipalities: for various public works projects including convention centers, courthouses, libraries, schools, stadiums, sewage treatment facilities, schools and building renovations
- Industrial and commercial manufacturing plants and private research laboratories

## DRBs in Canada

The DRB Foundation database reveals that only nine Canadian projects have employed DRBs from the start of data keeping in 1996 until today.

Seven of these projects were related to the expansion of the Toronto Transit Commission (TTC) subway from 1996 to 2002. As such, one owner (TTC) and five Canadian contractors were exposed to the DRB process. The other two projects listed in the DRBF database involve two current tunnel projects: one in

Niagara Falls where a European contractor is working for Ontario Power Generation (OPG) and another in Vancouver where a European-American joint venture was working for the Greater Vancouver Water District (GVWD). However, this contract was terminated in 2009 and the contractor was replaced by another joint venture between a Canadian and two American firms.

Revay is aware of at least two projects that employed DRBs which are not listed in the database. These are the Confederation Bridge (1993-1997), and the north south route of the New Brunswick Highway (2006-2007)<sup>[4]</sup>. This averages less than one project per year employing the DRB process throughout all of Canada, as opposed to at least 100 such projects in the United States.

Canadian exposure to DRBs has been limited to a handful of owners and contractors. Considering that construction disputes are probably just as frequent in Canada as in the United States, the limited number of Canadian projects employing this apparently successful dispute resolution process is surprising. This can perhaps be explained by the unfamiliarity of Canadians with the DRB process.

The few cases in Canada allow us to delve more deeply into some details of the disputes. Many of the seven TTC projects involved the construction of subway stations as well as tunnel sections. Interestingly, DRBs were not mandatory on the TTC projects; rather they were an option that could be exercised by the contractor and the TTC if both were in agreement.

The DRB process appears to have helped since out of the seven projects only three disputes (two of which were on the same project) went to a formal hearing of the DRB. These disputes were settled after the DRB hearings, but one of the cases came very close to litigation.

### Toronto Sheppard Subway Twin Tunnels Project<sup>[5]</sup>

This project involved the excavation by tunnel boring machine (TBM) of two side by side tunnels approximately 4.3 km in length and located 5 to 25 m below the surface of Sheppard Avenue East. The TTC entered into a \$93 million contract with a joint venture of three Canadian

contractors.

The contractor submitted a \$4.4 million claim for additional trucking costs to dispose of high slump tunnel muck, alleging that this condition was the result of the higher than anticipated usage of foam to condition the tunnel spoil during excavation. Its tunnel subcontractor was required to haul the liquid-like muck to an inconvenient and expensive disposal site at a cost far beyond what was included in the contractor's bid. The contractor argued the use of foam was much higher than could have been anticipated by the contract documents.

The claim was initially submitted to the TTC who responded that there was no entitlement. After preliminary settlement discussions were unsuccessful, the parties agreed to bring the matter before a formal hearing of the DRB. The DRB panel was comprised of three very experienced engineering consultants with substantial underground expertise. One was selected by the contractor and approved by the TTC; another was selected by the TTC and approved by the contractor. The third, who would become chairman, was selected by the two previously chosen DRB members and also approved by both the contractor and the TTC. Both TTC and the contractor were given the opportunity to make pre-hearing submissions, to present both factual and expert evidence, to make further submissions at the two-day hearings and to make post-hearing submissions.

Shortly after the hearing, the DRB released a comprehensive written *"recommendation"* *unanimously rejecting the contractor's claim stating that it "has not made a reasonable case for extra compensation based upon arguments that lay within the four corners of the contract"*. The DRB panel felt the problem was a risk assumed by the contractor, who rejected the DRB's non-binding recommendation and commenced litigation procedures.

The case then followed the expensive and time consuming litigation route. After about 2.5 years it settled before trial when it became clear that the DRB recommendation would be available to the court, and that the unanimous recommendation of the three experts rejecting the claim would be a formidable obstacle to overcome at trial.

This case underlines several important principles:

- In preparing its recommendation, the DRB must respect the terms of the contract. No matter how harsh, the DRB cannot rewrite or re-interpret the contract to provide a seemingly more equitable solution to one party
- Though the recommendation of the DRB is generally non-binding and can be rejected by one or both parties, it must nonetheless be given a respectable weight by the parties. In fact, in many but not all contracts, the DRB recommendation can be discovered in subsequent legal proceedings. Considering the experience of the panel and their familiarity with the project, such recommendation could significantly influence the outcome of subsequent legal proceedings
- Although a recommendation may be officially rejected by one party, it often forms the basis for later settlement to be negotiated between the parties

#### Niagara Tunnel <sup>[6]</sup>

This project involves the construction of a 10.4 km, 14.4 m diameter tunnel to increase the amount of water flowing to the existing turbines at the Sir Adam Beck generating station. In August 2005, a European contractor was awarded a design-build contract in the amount of \$623 million to complete the tunnel project.

Several intriguing aspects made this a very demanding contract.

The tunnel required excavation in a complicated geological setting including passing below a deep buried valley, excavating in a high stress environment and potentially swelling rock, evidently high risk subsurface conditions. These were described in a mutually developed version of the Geotechnical Baseline Report (GBR) that would serve to measure any contractor claims for encountering unanticipated subsurface conditions.

The tunnel was to be excavated using a two pass system. First, excavation with an open TBM with the immediate installation of primary rock support (ribs and

bolts), then a second pass installing a waterproof membrane to prevent transported water from infiltrating the rock causing swelling and possible cracking of the permanent poured in place concrete liner, also placed in the second pass.

As this was a design-build mandate, the contractor was required to guarantee the tunnel liner for its expected 90 year life.

It was extremely important to respect the project schedule. OPG required the project complete by June 2010 to ensure delivery of the much needed power to the network and generate revenues. The contractor for its part faced stiff liquidated damages.

At that time, the tunnel was the largest diameter tunnel excavated by a TBM in hard rock. The term "hard" rock may however be a bit of a misnomer in this case, because a large portion of the tunnel was to be excavated in a Queenston shale, which is a rather soft rock compared to others. In fact, tunnel excavation progress was greatly perturbed by the continuous collapse of the crown resulting often in 2-3 m of overbreak while excavating in this formation.

The contractor put the owner and its engineering agent on notice alleging "Differing Subsurface Conditions" (DSC) which required changes to its means and methods. After initial discussions between the parties no agreement was reached with regard to entitlement for any DSC. The owner alleged that the excessive overbreak was the result of the contractor's decision to change its means and methods, not the result of any DSC. After excavating only 2000 to 3000 meters of tunnel, (i.e. 20-30% completion), the project was facing a significant schedule overrun and an unsupportable expected increase in cost for the contractor to complete the work.

The parties eventually agreed to put the matter before a formal hearing of the DRB which was again composed of three very experienced tunneling experts who had already been meeting quarterly since the start of the project and were therefore very familiar with the parties involved and with the problems encountered. Both parties were given the opportunity to make several pre-hearing submissions involving position papers, rebut-

tals and response to rebuttal; as well as presenting both factual and expert evidence during several days of hearings and a site visit. The DRB responded with a comprehensive recommendation examining each alleged DSC.

The DRB rejected many of the contractor's allegations about the DSCs but did recognize some shared responsibility with regard to the difference between anticipated overbreak quantities and rock support in the GBR versus the actual overbreak quantities and rock support type that was installed. Interestingly, although neither party fully accepted the recommendation of the DRB, these recommendations formed the basis of negotiations between the parties to revise the lump sum design build contract into one with a target cost and schedule that took into account the difficult rock conditions encountered but with incentives and disincentives related to achieving the revised target cost and schedule.

This case underlines several important points:

- A DRB is especially useful in technically complex disputes
- A DRB can intervene early and effectively at a critical juncture in the project with advice enabling the resolution of a dispute before the end of the project
- Had the dispute not been resolved at this critical juncture, at the point where the contractor faced a significant increase in costs coupled with important liquidated damages for delay, the contractor may have been forced to default, or the contract terminated by the owner, resulting in significant increased costs to complete the work by another contractor, not to mention the owner's lost revenue and years of litigation
- Even if the DRB recommendations are not fully accepted, they can serve as the catalyst for an important re-alignment of the contract

#### Seymour-Capilano Tunnel<sup>[7]</sup>

This project involves the excavation of two 3.8 m diameter tunnels over a length of 7.1 km under Grouse Mountain in Vancouver which will convey raw water from Greater Vancouver Water District's

(GVWD) Capilano Reservoir to the project's new filtration plant at the Seymour Reservoir, and return treated water back to the head works of the Capilano distribution system. These are the first tunnels undertaken by GVWD and there are no existing bored tunnels through the mountains of the Vancouver region, and therefore no previous experience to draw from. In August 2004, an international joint venture was awarded a \$100 million contract. This bid was substantially lower than the two competing bids. Construction began on site in mid-January 2005, and the end date was scheduled for March 2009.

A DRB was set up at the start of the project and was to sit periodically throughout the expected 49.5 month duration. During the excavation of the vertical access shafts, the contractor encountered reaches of difficult mixed conditions comprising hard granite rock to one side and metavolcanic rock to the other. This affected drilling and blasting, causing approximately six months delay as well as a higher consumption of explosives and support materials. These conditions and their impact were the subject of the first formal DRB hearing and were resolved by the parties with the help of the DRB recommendation. However, the success of the DRB on this project remained limited to this one issue. Subsequent problems were not brought before the DRB.

The GBR predicted generally good rock for tunneling although some potential trouble spots requiring steel lining could be expected below buried glacial valleys at the beginning and end of the tunnels. However problems occurred in the deepest part of the alignment under a cover of about 500 m. Excavation was stopped in January 2008 when the tunnels were about 4.1 km or about 55% into their 7.1 km long drive. The contractor labeled these problems as "rock bursts" while the owner associated the problems with a combination of the rock's weakness and the release of in-situ stresses. Regardless of the characterization, a safety hazard was declared by the occupational health and safety authority Work Safe BC after several workers were injured and work could not restart until this safety problem was resolved.

The owner claimed that its tunnel designer and construction supervision

engineer prepared a plan that addressed the safety concerns and allowed for safe resumption of work. The owner also stated that this plan was endorsed by leading experts in rock mechanics and tunnel engineering. The contractor did not accept the plan and high-level discussions between contractor, client, designer, Work Safe BC, and the client's overall program and construction manager failed to resolve the stalemate. Although the contractor requested that the situation of perceived unsafe conditions in the tunnels be taken to the DRB, GVWD declined to participate.

In May 2008, faced with the contractor's continuing refusal to return to work, the GVWD terminated the contract expressing the position that it was left with no practical alternative in terms of completing the work. The contract's DRB clause permitted the GVRD to terminate the contract at any time, instead of passing before the DRB.

The owner also took possession of the equipment on site including both TBMs, one owned by the contractor and the other rented. The owner then re-bid the project and awarded a contract to complete the work to another joint venture, all the while mired in a legal battle with the first contractor who alleged that its termination was unlawful and wrongful. The contract awarded to the second joint venture to complete the remaining 50% of the excavation work was valued at about \$180 million, almost double the value of the entire original contract. How much of this extra cost represents escalation, additional costs to adapt to changed conditions, other costs related to mobilization of a different contractor remains to be determined. Suffice it to say the restart of the work came at a very high price.

With the overall cost of completing the project now doubled, the utility has sued to recover these additional costs from the original contractor. In return, the contractor is suing to recover its losses, including many millions of dollars for equipment confiscated by the owner, as well as millions in unpaid labor and materials supplied to the project prior to termination.

While resolution of the differences between the original contractor and GVWD could ultimately rest with a judge to decide

years from now and no doubt after significant expense has been incurred by both sides, one wonders if this situation could have been settled more quickly, more economically, and perhaps more amicably, had the parties accepted to bring the matter before the DRB, as was the case on the Niagara project.

This case underlines that:

- Despite the provision of a DRB clause and even the apparent success of the DRB process on the project, one party might still feel that a certain type of contractual dispute can only be resolved before the courts
- Without a DRB, positions can harden and the costs can escalate all the way to the courtroom

#### Present and Future DRB Projects in Canada

The new contract to complete the work on the Seymour Capilano tunnel project will involve a DRB, despite the fact that the major safety dispute involving the first contractor was not referred to the DRB.

It is interesting to note that no DRB now sits on the Niagara tunnel project, despite the apparent success in resolving its first major dispute. Apparently the parties decided that subsurface conditions are better known and the revised target cost and schedule contract fairly allocates risk.

It is understood that the New Brunswick DOT will establish a DRB for a 55 km section of the four lane Route 1 Gateway project between St. Stephen and River Glade.

The TTC is considering optional participation in the DRB process for several major contracts on the York-Spadina Subway extension project to be tendered in the near future.

As evidenced above, the number of new projects where DRBs are being considered is limited. This may be the result of a certain unfamiliarity of Canadian owners and contractors with the process.

### **Mechanics of DRBs**

The decision to use a DRB can be made before or during contract negotiations.

This indicates willingness by both parties to openly address issues long before they become disputes. In most instances, DRB provisions are incorporated into the contract's overall claim/change order/dispute resolution mechanism prior to bidding the work. A DRB can, however, be set up at any time during the course of the project should the parties agree to the procedure.

The DRB should be constituted prior to the start of construction, preferably immediately after the contract is executed. Utilization of the DRB process from the very start of a project maximizes its benefits and value. Experience has shown that any delay reduces its effectiveness.

Given the nature of the disputes likely to arise on construction projects, appropriately qualified engineers or other professionals are prime candidates for DRB membership. Most important and not to be overlooked, is that the members have undergone specific training from the DRB Foundation to fully appreciate the philosophy and procedures of successful dispute resolution.

In an effort to keep the process fact based, lawyers were shunned from early DRBs. Today, experienced construction lawyers are finding a role to play as chairman and panelists of certain DRBs involving complex cases, particularly where the parties believe there are important questions of law. However, the preference is still toward experienced construction industry practitioners. The emphasis is on informality and experience.

The DRB is officially established when the parties and board members execute a Three Party Agreement outlining the process, compensation, etc. This agreement also includes language to hold harmless all board members for any loss or damage related to members carrying out DRB activities<sup>[8]</sup>.

The board members are provided with all relevant contract documents and meet on the project at regular intervals which vary from project to project. Monthly meetings are typical of building projects whereas quarterly meetings are more frequent on highway and tunnel projects.

As mentioned, between meetings board members are kept up to date on the project through construction progress

reports and minutes of weekly project meetings, ensuring that they are always ready to address problems and disputes as they arise.

The DRB process complements the principles of partnering. In fact, many DRB panelists assist in the initial partnering meetings to familiarize themselves with the parties, and the potential problems. The DRB assists the parties by facilitating a harmonious atmosphere and by encouraging prompt solutions to job problems. The very presence of a respected DRB will tend to deter disputes as the parties will hesitate to submit frivolous disputes and try harder to resolve their differences on their own. The DRB preserves good working relationships because disputes are resolved before they seriously hinder the progress of the project.

Not all disputes require formal hearings. It is often reported that more disputes are avoided than heard because of ongoing interaction with the DRB. The DRB encourages the resolution of disputes at the job level and at the parties' mutual request, and may provide informal advice known as an "advisory opinion" on potential disputes. The procedure for an advisory opinion is very simple. Each party makes a brief presentation on its interpretation of the problem. The board then meets privately to discuss the problem, and later meets with the parties and provides an oral recommendation on how to proceed. Generally the board rules on entitlement only, leaving the parties to negotiate their own quantum. The use of advisory opinions<sup>[2]</sup> is relatively recent but their success rate is almost 100%.

Finally, the cost of a DRB is minimal. Historically, costs have ranged from about 0.05% of the final construction cost for relatively dispute-free projects to 0.25% of projects with more frequent disputes<sup>[9]</sup>. Meetings on building projects typically last 1/2 to one day, while quarterly meetings on large infrastructure projects can last one to two days. Costs can be easily estimated considering three persons, an eight-hour day and a reasonable hourly rate, but travel and subsistence expenses must be added. Formal hearings (if required) can also be easily estimated in a similar manner by guessing the number of days of hearings and adding time for deliberation and

preparation of the written recommendation. Typically the contractor pays the DRB invoices, and is reimbursed by the owner for half of all of the costs via monthly progress payments.

### Why Some DRBs May Not Be Perceived as Successful

As with any dispute resolution process, DRBs are not a panacea. The significant increase in popularity of the DRB process in the United States has brought with it some criticism<sup>[10]</sup>. Canadians can, however, profit from this experience and avoid repeating the same mistakes. The most common reasons for criticism and the perceived lack of success of DRBs are the following:

- Ex parte communications

Ex parte communications occur when one party in a dispute communicates with a member of the DRB without the other party's presence or participation. Because of the potential for perceived partiality, the DRB Foundation Practice and Procedures ban ex parte communications.

- Perceived partiality

Parties will lose faith in the DRB and will no longer refer disputes if there is a perceived partiality.

- Recommendations that do not fall within the contract

As mentioned earlier, the DRB has no authority to change the terms of the contract and its recommendations must respect those terms. The DRB is responsible for helping the parties understand the interpretation of the contract and not for establishing a "fair" settlement.

#### Other Criticisms of DRBs

Harmon<sup>[11]</sup> studied the effectiveness of DRB on the Central Artery Tunnel Project in Boston. The project, also known as the "Big Dig", was one of the largest and most complex urban transportation projects in the United States. Harmon studied some 86 construction contracts, of which 46 had DRBs. Overall, she found that DRBs were underutilized on this project. Several factors seem to have influenced the owner as well as the DRB contractors to ignore the benefits of the DRB process, as follows:

- Prolonged dispute resolution process

The DRB process could have been used more effectively on the project by hearing the dispute earlier. Unfortunately, certain barriers existed that prevented the dispute from going to the DRB in a timely manner. In this case, the contract provided an extensive and multilayered process requiring the contractor to present its claim to progressive levels of senior management for evaluation prior to being allowed to request a hearing before the DRB. The contracts also required any change order request above \$250,000 to be forwarded to the owner's legal staff for evaluation. Care must be taken when drafting the contract to prevent a barrier to the DRB process through a prolonged dispute resolution process.

- DRB viewed as adversarial

The DRB process described by the contract documents became adversarial and resembled arbitration. The problems were not reviewed as they developed. Rather, hearings became arbitrations of old unresolved issues carried out in a trial-like setting with the assistance of legal counsel and consultants.

- Preparation of the hearing was overly time consuming

Harmon indicates that in preparation for the hearing, virtually "no stone was left unturned" and that both field and contract administrative staff were fully occupied developing briefing books, charts, graphics, schedule analyses and other exhibits. This can be highly disruptive to the execution of the project. Faced with this time consuming prospect, parties sometimes opted not to bring cases to the DRB during the contract. Unresolved change order requests with other problems (delays, etc.) were held to the end of the project to be resolved through other processes. The use of advisory opinions should be encouraged to reduce this problem.

- Recommendations were neither clearly written nor convincing

Finally, certain recommendations were poorly written and unconvincing. The main purpose of the recommendation is to convince the parties of the wisdom of the panels' proposed settlement. The recommendation must be well crafted, well detailed and well explained. If this message is not well communicated, parties may feel the panel did not under-

stand the facts and issues. It is unlikely that after investing considerable time and effort developing their positions, parties will accept recommendations that were not well developed or appeared to step outside the terms and conditions of the contract.

### Recommendations to Improve the DRB Process

Other authors have also expressed advice on the do's and the don'ts. For example, Edgerton<sup>[12]</sup> suggests:

For owners – During contract preparation do not think of the DRB as another opportunity to get a leg up on the contractor, stacking the deck by: limiting the types of disputes that can come before the DRB, delaying the DRB review and thus making the DRB a claims adjudication board, or restricting the use of the DRB recommendation in any subsequent litigation. During construction, owners should put their partnering hat on and use the DRB to help achieve a settlement rather than expect it to support their position.

For contractors – Read the contract and specifications carefully and include enough money in your bid to build the project at the outset. Don't count on changes and claims to break even. If the contract appears one-sided don't submit a bid. Do not expect a DRB to throw out part of the contract or interpret it differently just to make it fair to the contractor.

Others<sup>[13]</sup> also suggest that DRBs must return to the basic original concepts: fostering communication between the parties and avoiding disputes before they escalate. This requires frequent communication between the parties throughout the project. With a strong commitment from both parties to understand each other's interests and limitations, many believe disputes can be avoided or at least reduced.

### The Time Has Come for More DRBs in Canada

The DRB process is designed to be faster, cheaper and better suited for construction disputes than mediation, arbitration or litigation. The parties carefully pick their own panel based on integrity, knowledge of the work, and experi-

ence in dispute settlement. The process is most effective when an issue is brought to the panel contemporaneously with the evolution of the dispute, when the parties can view the conditions present at the project before rendering a recommendation on the merits of the dispute and before the parties have spent considerable effort and money. Waiting until the parties have hardened their positions and invested heavily and then asking the DRB to act merely as an arbitration panel and decide on old issues is not the recommended approach.

Any reluctance to use DRBs in Canada stems primarily from unfamiliarity with the process. The legal community in Canada is evidently more comfortable working within the bounds of established procedures and jurisprudence. Lawyers might be resistant to including provisions for a DRB into the contract clauses thinking a DRB could work outside the terms of the contract. This fear is unfounded, however, because as mentioned previously, all disputes must be reviewed in strict reference to the contract's terms and conditions. A DRB cannot re-write the contract. There may also be some concern from lawyers about being trapped by an un-appealable DRB recommendation. Again, this fear is unfounded. The current popularity of the DRB process is due in part to the fact that advisory opinions and recommendations are non-binding. The disputing parties get the benefit of a neutral panel's experience and opinion about the case. This advice is given at a time when costs and impacts can still be mitigated.

Consulting engineers and architects might have been reluctant to include DRBs into a contract believing the DRB could usurp their authority as first deciders when a dispute arises. This fear is

also unfounded. Consulting engineers maintain their right to express themselves first regarding any dispute that arises. The DRB will intervene only after a dispute is brought before it at the request of both parties. Consulting engineers and other experts are also able to express their opinion during any DRB hearing.

Owners may have been hesitant to impose the process on contractors unfamiliar with this approach. In such a case, the TTC's approach of including optional DRBs with the approval of both parties seems wise at this time.

Considering all the positive aspects, proven record of success and growing popularity throughout the world, it is suggested that the Canadian construction industry seriously consider the use of DRBs in Canada.

This suggestion is not ours alone, in fact articles by several prominent Canadian lawyers and engineers over the last few years have already suggested the same [5, 14, 15, 16, 17]. The concluding remarks of one of these articles [18] are reproduced below:

*"The DRB process, properly organized and implemented, makes a great deal of sense. As governments and the private sector prepare to embark on various infrastructure project initiatives, through public-private partnerships or otherwise, the implementation of project-based DRB dispute resolution can provide important savings and benefits too valuable to ignore."*

The time has come for more DRBs in Canada.

- 1 Sometimes referred to as Dispute Review Boards in the past.
  - 2 DRBF website [www.drbf.org](http://www.drbf.org) \*
  - 3 FDOT website <http://www.dot.state.fl.us/construction/CONSTADM/DRB/DRBMain.shtml> \*
  - 4 If you are aware of any other projects with a DRB, please let us know.
  - 5 "Dispute Review Boards" and "Adjudication"; *Two Cutting Edge ADR processes in International Construction*, Kirsh, Harvey J., delivered to the 2008 American Bar Association Annual Meeting.
  - 6 Niagara Project Website [www.niagarafrontier.com](http://www.niagarafrontier.com) \*; see also URL: [www.tunneltalk.com](http://www.tunneltalk.com) \* and search for Niagara.
  - 7 See [www.tunneltalk.com](http://www.tunneltalk.com) \* and search for Seymour-Capilano tunnel.
  - 8 For an example of Third Party Agreements see the DRBF website under Reference [2]
  - 9 Texas DRB website [www.drbtn.org](http://www.drbtn.org) \*
  - 10 "Reviewing the Dispute Review Board", Rode, Lisa quoting Stolz, John, Jacobs Associates <http://www.jacobssf.com/images/uploads/Innovation-Publications-FinalLiner-Vol13-07.pdf> \*
  - 11 "Case Study as to the Effectiveness of Dispute Review Boards on the Central Artery/Tunnel Project", Harmon, K., ASCE Journal of Legal Affairs and Dispute Resolution in Engineering and Construction, February 2009.
  - 12 "Enhancing the Success of DRBs", Edgerton, W., speech at the annual meeting of the DRBF in October 2008, see article at [www.tunneltalk.com](http://www.tunneltalk.com) \*
  - 13 "Maximizing the Value of DRBs", Fourie, F. (Kiewit), DRBF Annual Meeting and Conference 2007.
  - 14 "The Rise of Dispute Resolution Boards", Marston, D., Conference of the Canadian College of Construction Lawyers, Wallace Nova Scotia, June 2006.
  - 15 "Alternate dispute resolution saves both time and budgets" Article by O'Reilly, Dan in Daily Commercial News quoting Harvey Kirsh, July, 2009. [www.dcnonl.com/article/id34457?search\\_term=Kirsh](http://www.dcnonl.com/article/id34457?search_term=Kirsh) \*
  - 16 "Dispute Review Boards Help Settle Disputes During Construction" McKillop, A, CDR.11, 2003 AACEI Transactions.
  - 17 "Engineers and Dispute Resolution Boards: A sensible approach for infrastructure projects", Marston, D., P. Eng., JOURNAL OF POLICY ENGAGEMENT, Vol. 2 No1, January 2010, URL: [members.peo.on.ca/index.cfm/ci\\_id/38564.htm](http://members.peo.on.ca/index.cfm/ci_id/38564.htm) \*
  - 18 "Dispute Resolution Boards (DRBs) – Creative ADR for Infrastructure Projects" Marston, D. Canadian Arbitration and Mediation Journal, Fall 2009.
  - 19 Analysis of Dispute Review Boards Application in U.S. Construction Projects from 1975 to 2007. Journal of Management in Engineering/ASCE/April 2010. Carol C. Menassa, A.M.ASCE, and Feniosky Peña Mora, M.ASCE.
- \* All above mentioned websites were confirmed operational at the time of this publication.

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