

Dispute Resolution Process in Construction Sector: Causes and Prevention

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Abstract - Over 200 construction contracts with DRBs start every year, worth over US \$7 billion. An estimated 200 disputes are settled each year through the use of DRBs. More importantly, it is often reported that more disputes are avoided by ongoing interaction with the DRB than are actually heard.

Increased use of advisory opinions has contributed to the avoidance of disputes. This process is inexpensive, rapid, informal, and is implemented prior to the parties becoming entrenched in adversarial positions. The reported success of advisory opinions is nearly 100%.

I. INTRODUCTION

For those who are considering using the Dispute Resolution Board (DRB) process it is of interest to learn of specific examples of previous application of the method. A wide variety of applications and locations are presented in this appendix to allow a prospective user to appreciate the extent of use of the process on various types, sizes and locations of projects.

While it is normal for the DRB process to be conducted under a veil of confidentiality, so the use of DRB examples which have been freed of the confidentiality requirement to some extent are studied in detail. Specific details of disputes brought to DRBs are presented where possible however confidentiality reasons limit the amount of detail which can be presented.

II. CASES STUDIED

The following Projects were considered for study where Dispute Resolution Board procedure was applied:

- San Antonio River and San Pedro Creek Tunnels, Phase II, Texas, USA.
- Bradley lake hydroelectric tunnel construction, Arkansas, USA.
- Construction of reinforced concrete spread wall footing foundation for noise wall, Florida, USA.
- Hanging Lake Viaduct, Colorado, USA.
- Inter-Island terminal, Honolulu, Hawaii, USA.
- Ertan hydroelectric project, China.
- Construction of high occupancy vehicle (HOV) overpass, Washington, USA.
- Construction of concert hall and Phoenix Suns basket ball arena seats 19400, Arizona, USA.

- Marine industrial park tunnel, Boston, Massachusetts, USA.
- Akron convention centre, Ohio, USA.
- Heavy rail rapid transit systems, Washington, USA.
- Xiaolangdi multipurpose dam, China.

(Source: for more details of above case studies refer to the website of www.drbbf.org).

III. SUMMARY OF ABOVE CASE STUDIES

The summary of all these above case studies is as below:

The objective of all the above mentioned case studies was:

1. To prevent disputes.
2. To provide recommendations upon disputes which do arise to assist the parties to avoid further disputes.

From the information available for the above mentioned project case studies, it was noted that:

1. On some projects the DRB was not called upon to provide recommendations, since the presence of DRB itself became a preventive mechanism for dispute occurrence.
2. While in other projects several recommendations were issued which were accepted by both the parties and hence did not go for arbitration or in the court.

Both situations are indicative of a successful DRB

The cost or fee of Dispute Resolution Board varied from 0.13% to 0.26% of the final cost. It is inferred here that the cost on DRB is piecemeal as compared to the very high costs occurring because of disputes. The final cost of the project ranged from 2.25% less as compared to the bid cost up to 32.39% more as compared to the bid cost for the above case studies. Also, in most of the cases the bid cost was lower than the estimated cost and varied from 36.84% below to 11.76% above as compared to the estimated cost.

In the above cases the disputes those were heard ranged from 0 to 50 and the recommendations given by the DRB that were accepted ranged from 0 to 50.

Also, it was noticed that the DRB in all the case studies were successful as none of the disputes went for arbitration or in the court. At the end of the project no claims were outstanding. Cost and time impacts were within control. In most of the cases the project was completed before the scheduled date of completion. Due to DRB, contractor's funds were not locked up thereby resulting in smooth cash flow. Due to this contractor could work fast. Time was not wasted for pending decisions. Due to the introduction of DRB from the very beginning of the project there were very less distractions for the staff.

Disputes involved interpretation of the contractual documents, technical specifications, etc.

DRB emphasized on good co-ordination within the project as well as with contractors on adjacent projects.

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One of the greatest strength of DRB was to resolve the problems at the lowest level thereby helping the owner, project manager and contractor. As the project progressed, the confidence in the DRB and its process grew. So DRB became more proactive and assisted the project in an informal capacity resolving potential disputes. The DRB was instrumental in gaining the parties consent to final settlement which was based on the DRB recommendations. In one of the projects the DRB promoted an amicable settlement of the dispute by recommending the parties to follow the contract provisions more closely. So the dispute did not advance to the court. Some projects appointed ASCE DRB which recommended that disputes less than \$ 5,000/- were excluded, and that the owner will determine which contractor is responsible for the costs of dispute hearings and split that cost with them. In most of the cases each contractor signed a separate three-party agreement. In one project although DRB was there but there were no issues at all for dispute. While in some projects, all the DRB members were selected on the basis of their residence at local place and were professional engineers. Due to this aspect lot of DRB fees were reduced, as travelling and their accommodation charges were almost nil and also their time was saved.

In one of the project, Escrow bid documents were key to settling several disputes. Information in the escrow bid documents was used to convince the owner to allow the contractor to sub-contract a portion of the work that had inadvertently been omitted from the bid form listing. In another, the project partnering agreement was instrumental in resolving several dispute issues. In one case there was a joint venture and each joint venture was supervised by a Chinese engineering company. There was no DRB in the original contract, but as the work proceeded the parties introduced a DRB, while in other the contract was as per World Bank but it also included modified FIDIC conditions. The adjudicator in one project could not issue the decisions soon even until five years after the hearings, which was costly, time consuming and distracting to all concerned. But then to expedite the process the owner inserted Alternate Dispute Resolution (ADR) provisions, to its contracts. The ADR process allowed the parties to settle issues arising out of the performance of the contract.

The DRB fostered an attitude of, "let's resolve our differences in the field".

Owners reactions: Owner was convinced that the DRBs have served it well and hence, were successful, therefore now recommends its use on all future large projects. The DRB was a catalyst which helped both the owner and the contractor to more objectively assess their relative positions. Owner agreed that the DRB were instrumental in the successful resolution of claims. Owner believed that DRB recommendations were always fair and it has presented a favourable image of the agency to the construction industry and resulted in lower bid prices to the owner.

IV. ISSUES OF DISPUTES

After going through all these case studies thoroughly the main issues of disputes are illustrated below:

In the case studies the disputes arose mainly because of contract document in which the clauses, specifications, drawings and designs were not clear.

In one of the contract document the geological layers were not defined at all. In another project the dispute arose due to the problem in erection of the precast concrete segment final

lining considering tolerances and damage and in other for welding of steel tunnel liners. In some projects the actual subsurface conditions encountered differed from those shown on the plans in the contract documents.

In one project the contractor was responsible for design and implementation of an adequate dewatering system. So the dispute arose because of ambiguous contract condition. In most of the projects the contract did not define the amount of dewatering to comply with the specifications, water inflows, ground conditions etc. Also, the dispute arose regarding underground works during the river diversion because a massive acceleration program had to be undertaken to achieve timely project completion.

There was a dispute regarding quantity overrun for disposal of contaminated material. In one of the project several unique milestones and restraints were laid, which included construction restrictions. Very limited work area was available while maintaining the traffic on the existing two lane highway. Also, in few projects many unforeseen events occurred.

V. PREVENTIVE MEASURES FOR NON OCCURRENCE OF DISPUTES

- Adequate geotechnical data should be incorporated in the contract, so that the contractor can get a clear idea at the time of submission of bid and accordingly he can quote above, below or at par.
- Various clearances and permissions from concerned authorities should be taken before starting any project so that delay does not occur like environmental clearance, land clearance, no objection certificates, etc. Due to this lot of time can be saved and project can be completed on stipulated time.
- Unforeseen conditions should be taken into account and clause should be introduced in the contract document clearly regarding, who will bear the cost.
- Adequate funds should be available so that there is no hindrance in contractor's cash flow.
- Contract document should be as comprehensive as possible with all required information, drawings, designs, specifications, etc. It should be clear, unambiguous, and easy to understand.
- Roles of all the parties to the contract as well as their internal organizational structure should be well defined.
- Design and drawings should be clear and easy to understand with all minute details and should be attached in the contract document. Most of the issues or doubts of contractors can be made clear in the pre-bid meeting itself.
- Preparation of estimate should be perfectly done. All the survey records and geological investigation reports should be checked by a responsible person. In most of the cases due to urgency of floating the tenders, a person at junior level who does not have broad perspective prepares the estimate and it does not get scrutinized thoroughly at higher levels. The quantities worked out should be perfect as far as possible. The rates considered for various items should approximately resemble with the market rates or as per current district schedule of rates (DSR) or various reference rates used in different organizations.

- It is observed that most of the issues for occurrence of disputes are due to hidden measurements, works done during night hours, works where there is lack of supervision, emergency works that are required to be done compulsorily for safety factors for which prior permission was not taken and also works which are not in the tender. Also, in most of the cases the payment for dewatering is a major issue. Its measurement method, process and specification should be mentioned clearly. Therefore, while work is in progress there should be constant supervision and all the measurements should be recorded in detail with cross checks. Both the contractors engineer and owners or consultants engineer should sign on the measurement sheets.
- Monitoring should be done by on-line computerized system to improve its efficiency and effectiveness.
- There should be perfect planning, accurate procedures and moreover its implementation in the contract document.
- Project partnering may provide a good solution for avoidance of disputes, since responsibilities and risks are shared.

Considering the above aspects, the dispute resolution board should be appointed on large projects. DRB process is aimed at dispute avoidance or dispute minimization, rather than dispute resolution.

“Prevention is better than cure.”

REFERENCES

- [1] Above mentioned 12 case studies from the website of www.drpf.org.
[2] Abhi Shah and Prof. P.V.Akalkotkar, e- tendering system in government departments and PSUs for project procurement.