CHAPTER V : BORDER ROADS ORGANISATION

5.1 Loss due to collapse of a bridge

A bridge under construction by a Border Roads Task Force collapsed resulting in loss of ₹ 1.30 crore. Though the incident occurred in May 2008, a Court of Inquiry to ascertain the most likely causes for the collapse and to suggest remedial measures was convened after 15 months and its findings and recommendations were awaiting approval of the Competent Authority as of December 2010.

Director General Border Roads (DGBR) issued instructions in September 2001 to Headquarters (HQ) Chief Engineer Project Sewak that in case of departmental construction of bridge, the designs and drawings of centering and shuttering will be approved by Project HQ before actual execution on ground as they constitute very important stages in the construction of permanent bridges. Any inadequacy in the provision of centering/shuttering runs the risk of loss of Government property and human lives besides wastage of the time and efforts involved.

DGBR in August 2004 accorded administrative approval and expenditure sanction for 'construction of 35 metre span pre-stressed concrete permanent bridge and approach road along with its appurtenant works over Sidzu Nallah at Km 39.4 on Kohima –Jessami Road (NH-150)' at an estimated cost of ₹ 1.46 crore. The work was under the jurisdiction of Chief Engineer (CE) Project, Sewak. Execution of the works was commenced departmentally by 89 RCC[27] under 15 Task Force (TF) in September 2005 with probable date of completion in March 2007. In May 2008, when the physical progress of the work was about 77 *per cent*, the superstructure of the bridge collapsed. To investigate the circumstances under which the bridge had collapsed, the CE Project convened the Technical Board of Officers (TBO) in May 2008 instead of convening a Court of Inquiry (COI) as advised by DGBR. The TBO attributed the main reason for collapse of the structure to failure of staging/shuttering created to support the load of superstructure. Officials responsible for execution of the project were also not aware of the DGBR's instructions issued in 2001 and the designs and drawings of centering/shuttering of the bridge were not approved by the CE Project before execution on ground. The TBO worked out the loss of ₹ 1.30 crore due to collapse of the bridge and did not pinpoint responsibility for the same.

After 15 months of collapse of the bridge, HQ DGBR ordered in August 2009 a Court of Inquiry (COI) to investigate the causes leading to the collapse of the superstructure and to fix responsibility for it. Although the COI met in November 2009 and submitted the findings and recommendations to HQ DGBR, the same had not been concurred to by the competent authority as of December 2010.

[27] RCC: Road Construction Company

Thus, non-adherence to the instructions of DGBR by the CE Project regarding approval of designs and drawing of centering/shuttering and failure to implement checks and balances during execution of the work by the executives had not only led to loss of ₹ 1.30 crore to the state exchequer but also resulted in non-completion of the sanctioned project for over six years.

The matter was referred to the Ministry in October 2010; their reply was awaited as of July 2011.

5.2 Non-completion of bridge after twelve years of sanction

The bridge over river Dhauliganga in Uttrakhand could not be completed after 12 years despite spending ₹ 3.54 crore.

Improper planning and supervision resulted in non-completion of superstructure of a bridge after nine years of completion of abutment work executed departmentally at a cost of ₹ 2.31 crore. The case is discussed below:

Director General Border Roads (DGBR) accorded sanction in November 1998 for construction of a major bridge of 80 metre departmentally with intermediate pier at a cost of ₹ 3.03 crore. Work of both abutments[28] of bridge was completed departmentally up to cap beam level in March 2000 at a cost of ₹ 2.31 crore. There was difference of 1.37 metre between bearing cap top levels of both abutments which was due to original proposal of two span bridge. But since problems were envisaged during excavation of pier foundation, DGBR decided in July 2000 for design and construction of a steel superstructure bridge of 75 metre span by tender. For execution of the subject work DGBR issued tenders in January 2001 but the same had to be cancelled due to changes in Reduced Level(RL) of deck to avoid steep gradient in approaches and due to less vertical clearance as suggested by the Chief Engineer, Project (CE(P)) in the design. DGBR in September 2001 had finalized superstructure of bridge as inverted deck type but revised the RL of the deck in July 2002. The tenders were invited again in September 2002 and opened in December 2002, and rates quoted by M/s Kundan Singh Prem Singh Jamnal for ₹ 1.20 crore being lowest were accepted. Contract was awarded in May 2003. The contractor was to start the work after approval of drawings by DGBR and to complete the same by December 2004.

The contractor informed the CE and others in September 2003 that work on the superstructure of bridge would be started only after receipt of approval of drawings already submitted by him. The DGBR approved the design and drawing in September 2004. The contractor was paid ₹ 0.90 crore between July 2004 and January 2006. It would appear that no defect in the work was noticed by Bridge Construction Company (BCC) of General Reserve Engineer Force (GREF) prior to the Officer Commanding of the BCC observing the eccentricity of bearing plates during an inspection in November 2007. The contractor was advised to rectify the eccentricity and not to carry out further work till its rectification. A Board of officers held in August 2008 to assess the facts found that "existing structure does not seem to be safe".

[28] An abutment supports the ends of a bridge superstructure.

Despite issue of notices between September 2008 and March 2009, contractor did not rectify the defect. On the recommendations of Task Force HQ in April 2009, CE (P) cancelled the contract in October 2009 at the risk and cost of defaulting contractor.

Technical Board of Officers (TBO) held in November 2009 recommended that superstructure of the bridge be de-launched in totality and a new superstructure be launched. CE (P) agreed with these recommendations and forwarded these to DGBR in February 2010 along with proceedings of the TBO for their decision which was awaited as of April 2010. A total expenditure of ₹ 3.54 crore was booked till January 2010 including payment made to the contractor of ₹ 0.90 crore.

On being pointed out by Audit DGBR replied in October 2010 that a contract would be concluded at risk and cost of defaulting contractor and the amount of new contract/compensation charges would be recovered from the defaulter.

The fact remains that the bridge for which sanction was accorded by DGBR in November 1998 could not be completed after more than twelve years. In yet another case reported in paragraph 5.1 of this Report a bridge under construction had collapsed when about 77 *per cent* of the work was done. These reflect badly on the efficiency of executing agency for construction of bridges required in strategic areas. Responsibility for non-construction of the bridge in time needs to be fixed.

The matter was referred to the Ministry in September 2010; their reply was awaited as of July 2011.

5.3 Avoidable procurement of core drilling machine

Though there was no demand from the Chief Engineers, Director General Border Roads procured eight core drilling machines for five Project Chief Engineers. None of the machines including accessories valuing ₹ 1.81 crore could be used for the intended purpose.

Core Drilling Machine (CDM) having capacity to bore upto a depth of 60 metre is used for taking soil samples and is mainly used for Bridge constructions. To make up for the deficiency against authorisations of eight soil Investigation Section (SIS) unit, Director General Border Roads (DGBR) placed three supply orders on M/s AIMIL Limited New Delhi between December 2006 and March 2007 for supply of eight numbers CDMs along with accessories for five Project Chief Engineers (CE Project) at a total cost of ₹ 1.81 crore as under: -

Sl. No.	Date of Supply order	Quantity	Distribution	Amount of supply order (₹ in lakh)
1	30 December 2006	04	CE (P) Beacon – 01 CE (P) Sampark – 01 CE (P) Himank – 01	90.00

			CE (P) Hirak - 01	
2	14 March 2007	02	CE (P) Beacon – 02	45.58
3	28 March 2007	02	CE (P) Sampark – 01 CE (P) Dantak – 01	45.90
	Total	**08**		**181.48**

Say ₹ 1.81 crore

As per terms and conditions of the supply orders, 90 *per cent* payment was to be released at the time of delivery and balance 10 *per cent* after satisfactory commissioning of the equipment. The present position of receipt, commissioning and utilisation of the CDMs is as under:

Date of Supply order	**Name of CE(P) and quantity**	**Date of Receipt**	**Date of commissioning**	**Present position of utilization (in Hrs)**
30/12/2006	CE (P) - Himank - 01 CE (P) - Beacon - 01 CE (P)- Sampark- 01 CE (P) Hirak - 01	25/10/2007 25/10/2007 25/10/2007 24/10/2007	Not commissioned 03/07/2010 12/09/2009 19/05/2008	Nil 04 14 50.50
14/03/2007	CE (P) Beacon – 02	29/3/2008	01/07/2010 03/07/2010	05 09
28/03/2007	CE (P) Sampark – 01 CE (P) Dantak – 01	29/03/2008 30/03/2008	12/09/2009 Not commissioned	09 Nil

Audit found that the actual requirement of the CEs/Task forces had not been ascertained by the DGBR before procurement of the CDMs as explained below:

- Three CDMs received in CE (P) Beacon between October 2007 and March 2008 were commissioned only in July 2010 and ran for only 4 to 9 hours from their dates of commissioning to January 2011. Three Task force Headquarters (TF HQ) under CE (P) Beacon to whom one CDM each was issued informed to the CE (P) in January 2008 and April 2009 that there was no requirement of CDM to them as bridge works were being got executed through contracts and as such the CDM were declared surplus.

- Two CDMs received by CE (P) Sampark in October 2007 and March 2008 could only be got commissioned in September 2009 and used for 9 to 14 hours only upto January 2011.

- One CDM received by CE (P) Dantak in March 2008 could not be installed as of January 2011.

- One CDM received by CE (P) Hirak in October 2007 was declared surplus in August 2009.

- One CDM received by CE (P) Himank in October 2007 was declared surplus in June 2008 and as such it was transferred to the Task force under CE (P) Vartak (now CE (P) Arunak) in August 2008, which could not even be commissioned as of January 2011.

Thus procurement of eight CDMs for five CE (Ps) were unwarranted and these could not be utilised for the intended purpose for the last three years, which had resulted in idle expenditure of ₹ 1.81 crore.

The matter was referred to the Ministry in July 2010; their reply was awaited as of July 2011.