

Chapter 3: Venues developed by NDMC and PWD

3.1 Introduction

The NDMC and PWD, GNCTD developed competition/training venues at Thyagaraj, Talkatora, Shivaji, and Chhatrasal Stadia and Government Model Ludlow Castle School.

The venue wise major works, their tendered cost and the contractors' details are given in Table 3.1 below:

Table 3.1 – Works at other Venues

(₹ in crore)

Work	Consultant	Estimated cost	Tendered cost	Contractor
Talkatora Indoor Stadium				
Construction of new sports facility block with basement parking	M/s Raja Aederi Consultants Pvt. Ltd	28.18	52.98	M/s Simplex Projects Limited
Addition and alteration of existing stadium		10.60	19.19	M/s Simplex Projects Limited
Shivaji Outdoor Stadium				
Construction of two hockey pitches, stadium, new sports facility block with two level basement parking	M/s Raja Aederi Consultants Pvt. Ltd	80.85	160.27	M/s China Railway Shisiju Group Corporation
Thyagaraj Stadium				
Package 1	Peddle Thorp Arch. Melbourne in JV with Kapoor Associates	95.33	103.96	JMC Projects (I) Ltd
Package 2		89.01	108.80	JMC Projects (I) Ltd
Chhatrasal Stadium	Benjamin Benjamin & Vats	50.68	60.26	Era Infra Engg. Ltd.
Ludlow Castle	A.G. Krishna Menon	8.50	11.25	Arora Construction Co.(P) Ltd.

3.2 Venues developed by New Delhi Municipal Corporation (NDMC)

3.2.1 Selection of Raja Aederi Consultants Pvt. Ltd as Architect consultant

In April 2006, two separate NITs were issued for appointment of Architect Consultant for improvement/upgradation of Talkatora Indoor Stadium (TIS) and Shivaji Stadium, with the key eligibility parameter of experience in providing services for sports venues of prescribed contracted value¹. Three bids² were received and the tenders opened on 23 May 2006. Based on technical bids, only two applicants were found eligible and the contract was awarded to Raja Aederi Consultants Pvt. Ltd., being the L1 bidder, for which letter of intent (LoI) was issued on 3 July 2006 and contract signed in October 2006.

Audit observed that none of the three bidders were technically eligible. While Arkitektural Grids, was rejected for non submission of requisite documents, the technical bids submitted by Kothari & Associates and Raja Aederi Consultants (Pvt.) Ltd, were also deficient. Kothari & Associates submitted merely a list of completed works without any certificates. Raja Aederi Consultants (Pvt.) Ltd's technical bid was also ineligible on the following points

- It had submitted the bid on the basis of an unregistered Memorandum of Understanding (MoU) (written on an ordinary paper) with Sterling Engineering Consultancy Services Pvt. Ltd. dated 18 May 2006, signed five days before the opening of the bid i.e. 23 May 2006. Interestingly, the original last date of submission of bids was 16 and 17 May 2006, which was extended on the request of the potential bidders;
- Raja Aederi Consultants (Pvt.) Ltd., as such, had no independent experience in providing architectural services for sports venues of the prescribed contracted value; and
- Sterling Engineering Consultancy Services Pvt. Ltd. provided an undated experience certificate issued by another architect Shashi Prabhu & Associates, instead of the client, stating that the former had rendered Structural and Design Engineering services for an indoor stadium project of National Sports Club of India.

¹ Three completed similar works not less than ₹ 15 crore or two similar works not less than ₹ 20 crore or one similar work not less ₹ 25 crore in the last 5 years

² Arkitektural Grids, Kothari & Associates and Raja Aederi Consultants (Pvt.) Ltd.

Thus, none of the applicants were technically eligible. Considering that the tender had been called in May 2006 when venue briefs were still to be received³, there was still scope for retendering and seeking an agency suitable for executing the services required, rather than choosing from a pool of ineligible bidders.

Further, the scope of work was increased from improvement/upgradation of the stadium to designing for major new construction at the stadium with an additional fee @ 3 per cent of estimated cost or actual cost whichever is less with a maximum of ₹ 4.25 crore (in addition to ₹ one crore already awarded for the work relating to renovation and upgradation). As of September 2011 an amount of ₹ 4.26 crore was paid to M/s Raja Aederi Consultants (Pvt.) Ltd.

This was a violation of tendering practices as the scope of work had completely changed and had increased (November 2007) from improvement/upgradation of both the stadia projects to designing for major new construction at the stadium based on the Venue Brief given by the M/s EKS at an approximate project cost of ₹ 204 crore for both stadia projects as against the earlier project cost of ₹ 30.45 crore for upgradation of both stadia. The revised construction programme envisaged a new five storey building with two basements and Renovation/improvement/upgradation of the existing stadia of Central Public Works Department (CPWD).

NDMC while confirming the facts stated that the evaluation of technical bid was carried out by a team of officers comprising of Engineer-in-Chief (E-in-C), Chief Architect of NDMC and Addl. Director General (ADG) rank officers of CPWD. If the appointment of fresh consultant were considered for revised scope of work, it would have delayed the whole work by one year due to procedural timeframe involved. To meet the target date of CWG, NDMC decided to continue with the same consultant for which necessary approval from the competent Authority was taken.

The reply is not tenable because from October 2006 to May/November 2008, there was sufficient time to retender and since M/s Raja Aederi was ineligible for a project valuing ₹ 30.45 crore, the award of consultancy work with project cost of ₹ 204 crore to the firm lacked justification.

3.2.2 Shivaji Stadium

3.2.2.1 Selection of China Railway Shisiju Group Corporation (CRSGC) as contractor for Shivaji Stadium

In February 2008, NIT for the composite contract for improvement/upgradation works at Shivaji Stadium was issued. Six agencies⁴ submitted

³ Venue brief was received for Talkatora Indoor Stadium in November 2006 and that of Shivaji Stadium in May 2007.

⁴ China Railway Shisiju Group Corporation; Ahulwalia Contracts (India) Ltd., JMC Projects

their bids and after opening the technical bids on 24 March 2008, all were technically qualified. On 10 April 2008, the financial bids were opened and CRSGC was declared the L1 bidder and the LOI issued on 19 May 2008.

Audit observed that CRSGC, a foreign company, with no existing established base in India was engaged and bid should have been rejected at the technical evaluation stage itself for the following reasons:

- No global tender was issued; the NIT was only published in national news papers, loaded on NDMC website and circulated to a panel of 18 Indian contractors;
- The primary eligibility condition was experience of execution of construction of new multi-storied block of Central Government or State Government departments/ Municipal Boards / Autonomous Bodies / PSUs, indicating an Indian context. CRSGC produced similar experience of working in China instead of India;
- CRSGC did not produce requisite registration certificates from competent authorities for local taxation and registered place of business in India. These were produced only after opening of the financial bid; and
- Generally, when foreign participation is envisaged, formation of JV with a local company or creation of a separate legal entity in India is insisted upon to ensure compliance with local laws, familiarity with local conditions and facilitate settlement of legal disputes, if any. No such provisions were made in this NIT.

The CRSGC should have been declared ineligible in the first instance. Further, its inability to deliver in Indian conditions and its reliance on Simplex Project Ltd., a sub-contractor for material and labour, finally reflected in the project not being completed in time for the Games. However, the exact extent of sub-contracting of the composite work by CRSGC to Simplex Project Ltd. is not known.

NDMC stated that the tenders were uploaded on NDMC and Delhi government websites and notice was forwarded to the President Contractor Association of Northern Railway, PWD & DDA, DJB for displaying on notice boards and also to 18 reputed firms. The documents submitted by CRSGC were attested by Indian Embassy at China. Eligibility of the firm was evaluated and approval of competent authority on evaluation of technical sub committee was accorded. The eligibility condition for experience did not mention that the experience of the firm had to be necessarily in India.

(India) Ltd., Nagarjuna Construction Co. Ltd., YMC Buildmore Pvt. Ltd. and Unity Infraproject Ltd.

The reply is not acceptable in view of the aforementioned conditions mandatory for executing a project under a Joint Venture.



Barricading in the names of main/sub-contractor at worksite

3.2.2.2 Inflated item rates in justified cost

NDMC while preparing the justified cost, to assess the reasonableness of the offer of L1, did not prepare it based on the most reasonable prevailing market rates available. Out of total 99 items of building structure (Justified cost ₹ 111.54 crore), six high value Delhi Schedule of Rates (DSR) items (Justified cost of ₹ 69.50 crore) constituting 62 *per cent* of the justified cost, were test checked in Audit using the coefficients/rates of material from CPWD Common Schedule of Rates (CSR) 2007, duly updated by price indices. This revealed that these items rates were inflated by 20.3 *per cent* resulting in extra cost of ₹ 14.11 crore.

NDMC replied that justification was prepared for 90 *per cent* of higher value items as per para 19.4.3.1 of CPWD Manual. The quotations were collected and enclosed wherever it was possible. In case the quotations were not available, the rates were verified from the market and for some common items the rates prevailing in the department were considered. The overall rate structure was prepared in consultation with Architect consultant and was duly scrutinized at various levels. Comparison of market rates and DSR rates plus enhancement was not considered as particular make and specification were incorporated in NIT. The method adopted by audit does not reflect true picture of prevailing market rate.

The reply is not acceptable as Audit has kept in mind provisions of Para 19.4.3.1 of CPWD manual while making calculations. In order to ensure that the justification is based on genuine market rates, written quotation is mandatory. Alternatively actual rates of similar work in other Divisions could also have been adopted. There was no evidence produced regarding such an exercise having been conducted at the time when justification was prepared.

NDMC has itself agreed on non-availability of quotations. In such a case the method of updating rates with price indices adopted by Audit is correct.

3.2.2.3 Avoidable expenditure on specialized items of Electrical works

As per CPWD manual 2007 (Para 5.6) to ensure quality, specialized works should be executed through specialized agencies. In the tender for Shivaji Stadium, items such as air conditioning plant, transformers, diesel generating sets, security system, firefighting equipments, etc. were included in a composite tender. It was however observed that around the same time NDMC invited separate tenders for such specialized works for Talkatora Stadium and due to direct participation of specialized agencies, the tender rates for the works of Talkatora Stadium were 11 to 45 *per cent* below the tendered rate of composite work of Shivaji Stadium even after considering 22.4 *per cent* discount offered by the contractor for Shivaji Stadium. Had separate tendering approach been followed in case of Shivaji Stadium also, an estimated saving of ₹ 2.23 crore could have been achieved.

NDMC replied that composite tender was floated in compliance with para No. 15.3 of CPWD Manual 2007 which states that system of composite tender shall be followed for works where sanctioned amount is more than ₹ 10 crore; and to ensure co-ordination among various agencies and in view of time constraint. The delay in completion of Shivaji Stadium project was due to pending case in court of law for vacation of the site. The reply is not acceptable since the stated coordination was not achieved and works of Shivaji stadium could not be completed but Talkatora stadium was ready in time for CWG-2010 despite separate tenders being floated. Further, NDMC's contention that delay in completion of Shivaji Stadium project was due to pending court case is not acceptable as site was clear of all hindrances in March 2009, and by taking 18 months from March 2009, the work should have been completed by August 2010. However, the same has not been completed so far (November 2011).

3.2.2.4 Unfruitful expenditure on Integrated Security System

M/s Electronics Corporation of India Limited (ECIL) was to install an Integrated Security System with CCTV Cameras at the Shivaji Stadium. The contract with ECIL for ₹ 2.21 crore was signed on 8 December 2009 by NDMC comprising of 'Legacy' and 'Non-legacy' items. The division had paid an advance of ₹ 1.18 crore on 23 December 2009 as per clause 6.6 of the agreement.

Audit observed that at the time of signing of contract and grant of advance only the work of foundation of the stadium was in progress and the integrated security system was required to be fixed just before the finishing of the

stadium and facility block. Hence work order was unnecessarily issued much in advance. Further there was contradiction in the condition for reckoning of time limit for completion of the work of security system which was 3 months or 30 June 2010 from the date of signing the contract and handing over the site with readiness whichever is later whereas the condition for grant of advance was immediately on signing the agreement. Had the condition of grant of advance been subject to handing over of the ready site then the blocking of funds of ₹ 1.18 crore in undue procurement of material would have been avoided.

NDMC stated that ECIL was awarded the work as per directions of Ministry of Home affairs. The material brought by ECIL was in the safe custody of NDMC. The advance payment of ₹ 1.18 crore has been made as per condition of agreement approved by Ministry of Home Affairs (MHA).

The reply is not tenable as due to faulty conditions in the agreement, advance payment was made prematurely to ECIL, resulting in blockage of funds.

3.2.2.5 Non-completion of the training stadium in time for CWG-2010

The venue brief for the stadium was received in May 2007, the architect was engaged in October 2006 and the composite contract for the work was awarded in May 2008, with the scheduled date of completion as November 2009. Of the major works only one hockey pitch could be prepared. The other pitch, two level basement parking, multi-storeyed facilities building and the stadium still remain incomplete (September 2011).

Audit observed that despite very close monitoring by the Empowered Committee of GNCTD, headed by the Chief Secretary, and repeated assurances by Chairman, NDMC, the facility could not be made available for CWG-2010. The main reason was the inability of NDMC to provide hindrance free site till March 2009 due to litigation with existing occupants of the restaurants and kiosks within the stadium complex. Despite, the decision to upgrade the stadium in July 2005, it is inexplicable why NDMC waited till the last minute to ensure vacation and availability of a hindrance free site.

The contractor also failed to deliver within the scheduled time of 18 months i.e. by September 2010 even after handing over of the clear site in March 2009.

NDMC replied that due to lack of hindrance free site, restricted project site and rains the work was delayed. Responsibility of contractor for failure to deliver the venue in time shall be dealt with as per provisions of agreement and extension of time shall be regulated with or without levy of compensation on merit of the case and in terms of the relevant clause of the agreement.

The reply is not acceptable as NDMC was well aware of the cited reasons. Hindrance free site was available from March 2009. Moreover responsibility for failure to deliver the venue in time needs to be fixed.

3.2.3 Talkatora Indoor Stadium (TIS)



Talkatora Indoor Stadium – Boxing

3.2.3.1 Engagement of Simplex Projects Ltd as the main contractor

There were two major civil works to be undertaken at TIS. The tendering process for each is summarised below:

Table 3.2 – Tendering process for award of works

Work	Tendering Process	Time line	Work	Tendering Process	Time line
Sports Facility Block	NIT issued	August 2007	Addition and Alterations	1 st Call Tender opened rejected due to high rate	November 2007 December 2007 January 2008
	Tender opened	September 2007		2 nd Call Tender opened	January 2008 February 2008
	Work Awarded	December 2007		Work Awarded	April 2008

Audit noticed that though the tender was advertised in the newspapers, NDMC website and circulated among the panel of contractors, in both contracts only one bidder, Simplex Projects Ltd. responded. While NDMC chose to retender the contract for additions/alterations, it decided to accept the single bid for the construction of the sports facility block. It is pertinent to note here that the period of execution of the contract was 18 months (sports facility block) and 12 months (addition/alteration work), and, therefore, there was scope for rebidding. Further, on analysis of justified rates of items constituting 27 and 44 *per cent* of the justified cost of the two buildings works, Audit observed that these were respectively 19 and 16 *per cent* higher than CPWD DSR rates applicable. Under the circumstances, it was desirable to re-bid and test the market once again.

It was also found that in sports facility block an amount of ₹ 2.40 crore @ 5.24 *per cent* of the justified cost was added to provide for future price rise of materials due to absence of price escalation clause (10CC) in the agreement, without any supporting provision in the CPWD manual for such ad hoc percentage.

In the absence of competitive bidding and difference in the justified costs and those worked out in audit on a test check basis, it is difficult to conclude that the best price was determined for the work in a competitive market.

NDMC stated that the justified cost was prepared as per para 19.4.3.1 of CPWD Manual 2007 and in addition various factors like conveyance charges, labour and costs of engineering establishment deployed, plant and tools etc were also considered while accepting the tender and together had a financial effect of 5-10 *per cent*. Rates of non schedule items were considered by verification from specialized agencies. CPWD DSR prices indices are circulated for complete DSR and not for individual items. Rates for few items are available in Delhi Government web site also.

Further re-tendering would have consumed time which would effect the target date of completion of competition venue and there was probability of getting even higher rates in future besides loss of precious time. In respect of flooring material a sub committee has been ordered to verify the market rates and adjustment if any would be made before paying final bill.

Reply is not acceptable as the item rates adopted by NDMC were not based on quotations in writing/actual invoices of other similar works hence cannot be relied upon as prevailing market rates. Further, the total cost of transportation of labour to worksite from the labour camp would be very negligible as compared to total cost of the work. This was accepted by NDMC in its reply of December 2011. The contractor's overhead and profit covers the other miscellaneous expenditure. The price indices adopted by Audit are for specific material released by Economic Advisor and not that of CPWD. Compliance on flooring material needs to be watched.

3.2.3.2 *Quality assurance for Talkatora Indoor Stadium and Shivaji Stadium*

In November 2008, NDMC engaged SGS India Pvt. Ltd. as the Third Party Inspection/Quality Assurance (TPIQA) agency for ongoing construction/ up gradation works at Shivaji Stadium and Talkatora Indoor Stadium for a lumpsum fee of ₹ 1.06 crore. The following deficiencies in the quality of works and TPIQA services were noted:

- TPIQA was engaged in November 2008, six months after the work had commenced in Talkatora Indoor Stadium with 30 *per cent* overall achievement of work which was unsupervised by the TPIQA;
- Though the TPIQA was required to conduct quality tests of input material, it only reviewed the testing facilities of the contractors and NDMC and the reports submitted by them. It did not review the test registers maintained by NDMC;
- NDMC also did not take effective action on the suggestions put forth by TPIQA in its periodical reports; and
- CTE, CVC also found several deficiencies in the quality of work executed. Both the cube test and core test of Talkatora Indoor Stadium failed; cement consumption was also reported as low in Talkatora Indoor Stadium. NDMC had sent clarifications regarding method of checking of cement quantity, but CTE had not dropped its observations.

The quality of construction works, particularly in Talkatora Indoor Stadium, was compromised despite the engagement of SGS India Pvt. Ltd. as TPIQA. However, NDMC gave an “**excellent grading** for technical proficiency” to SGS India Pvt. Ltd., even before the completion of work.

The lump sum fees of ₹ 1.06 crore to M/s SGS for both stadia projects was not to be increased due to time and cost overrun as per clause 13 of tender documents, however, NDMC paid ₹ 1.09 crore to M/s SGS upto June 2010 despite the fact that the construction work of Shivaji Stadium was not completed.

NDMC replied that TPIQA was appointed to assist NDMC in ensuring quality of work as per contract. Extra payment beyond agreement amount shall be recovered from agency. NDMC further stated that necessary action shall be taken on the basis of the final findings of CTE. At the time of award of work 18 months for Shivaji Stadium and 12 months for Talkatora stadium were considered, however, the work was delayed and the period of TPIQA was extended. TPIQA has been paid for the period which they have rendered services and sufficient bank guarantee is lying with NDMC for affecting recovery. The reply is not acceptable as TPIQA failed to ensure the quality of

work. The fact remains that the excess payment made to M/s SGS has not been recovered till December 2011.

3.2.3.3 Excess payment of ₹ 0.82 crore on substituted chairs

As per clause 12 of the contract read with para 23.3 of CPWD Manual the contractor should propose revision in the rate of substituted/extra item supported by proper rate analysis within 15 days of cropping up of the said item. Under the agreement for the work, item No.98 of supplying and fixing of stadium chairs with high density plastic (HDPE 5502) seat and back with load bearing capacity of seat 200 kg, back 80 kg, of dimension 450 mm x 400 mm x 400 mm, with eight years warranty was included in the original scope of work. The contractor had quoted his rate @ ₹ 2190 per chair, whereas the justified cost was arrived at ₹ 1393.80 per chair.

This item was substituted by HBYC-33 model Tanglong make chairs with high density plastic HDPE 5502 seat and back of dimension 420 mm x 420 mm x 420 mm. The cost of substituted chair was claimed by contractor @ ₹ 6500 and quantity was also increased from 3000 to 3150 chairs. Approval in principle of the Chairman, NDMC was obtained on 9 April 2010.

The rate of the substituted item was stated to be based on market rates but no analysis, invoice, quotations, etc. was found on record hence reasonableness of rates could not be verified. Further payment for the work started from 9th RA bill (October 2009) before approval(April 2010) in principle of the Chairman, NDMC. Approval of quantity and rates has not yet been obtained (December 2011). The substituted rate was about 2.97 times the tendered rate and the increase in cost due to the substitution was ₹ 1.36 crore⁵. However even though the contractor could not produce documentary proof of rates claimed by him yet payment of ₹ 1.35 crore for 2704 chairs fixed to the maximum capacity of the stadium was released @ ₹ 5000 each as per 13th R A bill (May 2010). It was observed by Audit that in case of Siri Fort stadium the landed cost of imported (May 2010) China make similar type of tip-up chairs was ₹ 2081.25 each inclusive of Delhi VAT @ 12.5 per cent and by framing its rate analysis, the substituted rate per chair worked out to ₹ 2634.56. Thus even considering the part rate of ₹ 5000 per chair an excess payment of ₹ 63.96⁶ lakh was made to the contractor.

Further though the said item was for providing and fixing chairs, payment for the extra 446 chairs brought to site but not fixed was also made (May 2010) @ ₹ 4000 per chair which was irregular as there was no use of extra chairs. As the contractor did not produce any proof of rate of chairs even secured advance was also not payable. This has resulted into an avoidable excess

⁵ [(Rs 6500 – Rs 2190) x 3150].

⁶ [(5000-2634.56) x 2704]

payment of ₹ 17.84 lakh at part rate. Thus total excess payment accounted for ₹ 0.82 crore.

NDMC stated that excess payment if any would be recovered with interest. After the audit no payment has been released to the agency till date as such recovery has not been affected. Sufficient due of contractor is pending with department for affecting such recovery. Estimates was prepared considering the original number of seats later on as per observation of fire department less number of seats provided.

The reply was not acceptable as adequate efforts had not been made to obtain source document of purchase. Further had fire safety norms been kept in mind while framing the estimates, the additional expenditure on extra chairs could have been avoided.

3.2.3.4 Irregular framing of rate analysis for deviated/ substituted /extra items

While determining the market rate for the purpose of regulating the claim of the contractor (Simplex Projects Ltd) for deviated/substituted/ extra items, 10 *per cent* over the cost of the material and labour was to be allowed to cover contractor's overhead and profit as per the contract.

In 21 of the 85 cases of claims of deviated/ substituted/ extra items reviewed by Audit it was found that the contractor's overheads and profit was taken as 15 *per cent* instead of 10 *per cent* applicable. This resulted in overpayment to the contractor of ₹ 1.17 crore and corresponding extra liability of ₹ 0.86 crore to NDMC. Details are given in **Annexure 3.1**.

In addition, in the claim for the substituted item of fixing structural glazed curtain wall system/space frame glazing system, while calculating the market rate of the tendered item, the justification rate that was determined three years ago was adopted, instead of adjusting it to the current price index or obtaining fresh rates from the market. This resulted in an undue benefit to the contractor of ₹ 0.64 crore, based on tendered rates adjusted with price index.

NDMC accepted that due to oversight excess payment has been made but till now only part payment has been made. The same will be corrected while obtaining the approval of rates of competent authority. The fact is that the part payment is more than the payment due.

3.2.3.5 Irregular payment before sanction of extra item rates

As per clause 12 of the agreement read with para 23.3 of CPWD Manual the contractor should propose revision in the rate of substituted/extra item supported by proper rate analysis within 15 days of requirement of the said item and Engineer-in-Charge (EIC) shall within one month of the receipt of

the claim supported by analysis after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined. However there is no provision in the contract to make any payment unless the rates are sanctioned by the competent authority.

In the following cases payment to the contractor was released in 13th R.A. bill (May 2010), pending sanction of extra item rate, which was ₹ 0.88 crore more than the amount payable resulting in undue favour to the contractor as given in table 3.3.

Table 3.3: Irregular payment on extra items/substituted item

Extra Item No.	Details in brief	Unit	Upto date quantity executed	Rate paid	Rate sanctioned	Difference in rate	Excess payment
6	4mm ACP for HVAC duct	sqm	860.32	14500	8798	5702	4905545
10	4mm ACP for outer column cladding	sqm	1180.48	10000	7332	2668	3149521
12	Gypsum Partition	sqm	2237.61	1798.50	1449.33	349.17	781306
						TOTAL	8836372

In reply it was stated that on account part rate payment has been made for extra items. The final approval could not be completed as the work is under investigation with CBI and all the original records are with them. Further payment/recoveries shall be affected after approval of the statements from Competent Authorities.

The reply was not tenable as approval in principle to extra items was obtained (July 2010) after actual payment which was more than those approved rates. The final approval of rates has not yet been obtained (December 2011).

3.2.3.6 Avoidable expenditure on ready mix lean concrete for filling in pit of column

As an engineering practice, column pits are filled with earth excavated on site, which was also envisaged in the contract. Instead, in the instant case, the contractor was permitted to fill it with a much more expensive option of ready mix lean concrete resulting in avoidable extra cost of ₹ 1.39 crore. In addition, ₹ 0.16 crore was also paid to remove the excavated earth from site.

In its reply, NDMC stated that no space was available at the construction site to store the excavated earth and the gaps were filled up with lean concrete/Ready Mixed Concrete (RMC) with pumps for early completion of work. The picture shown by Audit was old and of the area on which building has been constructed.

Reply is not acceptable as planning failure in timing of the works caused delay. The site had adequate space for temporary stacking. The picture below indicates the space available at the construction site and relates to the time when the column footing work was in progress and construction of building is a later event.



Picture of the construction site at Talkatora Indoor stadium indicating space available for construction activity.

3.2.3.7 Single tender for electrical work of DG sets

For the work of supplying, installing, testing and commissioning of a 1000 KVA diesel generating set at TIS only one contractor (M/s Sudhir Power Projects, Gurgaon) had submitted bid for the work. Accordingly, the work was awarded to the agency at a cost of ₹ 2.06 crore (i.e., 1.67 per cent below estimated cost of ₹ 2.09 crore). The work was awarded on 4th July 2008 with stipulated completion period of nine months (i.e., till 03 April 2009) and contractor has been paid ₹ 1.73 crore uptill now (September 2011), the completion certificate and final bill of the work was pending.

As completion of civil work of Talkatora stadium to a certain extent was imperative for installing the DG sets, Audit observed that the work period of this tender had to be extended for a total period of 20⁷ months, on nine instances (each extension of two to three months) till 03 December 2010. Thus pending completion of civil work, there was adequate time (20 months) at the disposal of tender inviting authority to go in for a second call so as to bring in more competition in this case.

In reply NDMC stated that the offer was less than the estimated cost put to tender hence was accepted. As lot of infrastructure works of CWG were in the pipeline, hence there was every possibility of getting higher rates on re-tendering. The site for installation for DG sets was not ready and to keep the contract alive the extensions were given.

⁷ (3.4.2009 to 3.12.2010)

The reply was not acceptable as the offer of the single bidder, even though below the estimated cost, cannot be said to be competitive. Had re-tendering been adopted more competitive rates could have been obtained.

3.2.3.8 Non-levy and recovery of compensation for delay in completion of work

All contracts awarded by NDMC for CWG-2010 indicated stipulated dates of start and completion of work specifying that time was essence of the contract. All agreements provided for recovery of compensation @ 1.5 per cent per month of delay in completion of work, computed on per day basis, not exceeding 10 per cent of the tendered value of work. Agreements for major works also included milestones indicating stages of work for achievement by the contractor. In case of failure of the contractor to achieve the contracted milestone, specified percentage of tendered amount was to be withheld from contractors' bills for adjustment against any recovery due from contractor for slow progress and delay in completion of work. Regarding grant of Extension of time (EOT), the CPWD Manual stipulates that based on the Hindrance Register where adequate and proper grounds exist, the Engineer-in-charge can grant extension of time. Remedies for delayed completion/ inferior workmanship at disposal of the Government include levy of compensation, termination of contract, award of unexecuted work to another contractor after giving notice to the contractor, forfeiture of earnest money/ security deposit/ performance guarantee etc.

In four cases of NDMC in which provisional EOT had been granted Audit found that no compensation was levied despite delays being attributable to inadequate manpower and lack of management on the contractor's part; and delays in providing drawings for the consultancy contract. In these cases extension of time had not been decided. The maximum amount of compensation that could have been levied but short recovered or not recovered in these four cases amounted to ₹ 18.75 crore as detailed in **Annexure 3.2.**

NDMC assured that due consideration would be taken for lapses on the part of the contractor at the time of final extension of time/bill and compensation levied. NDMC confirmed the facts in its reply of December 2011.

3.3 Venues constructed by PWD, GNCTD

3.3.1 Construction/ Upgradation of Thyagaraj Stadium



Thyagaraj Stadium

3.3.1.1 Overview

Construction/ upgradation of Thyagaraj Stadium involved:

- Construction of a multipurpose air-conditioned indoor stadium with a seating capacity of 5000, which could be used for various sports;
- Two warm up courts and one competition court for net ball; and
- Synthetic track of 400m x 8 lane for athletics (training venue).

3.3.1.2 Planning and Award

Peddle Thorp Melbourne (Australia), in joint venture with Kapoor & Associates, was appointed as the design consultant at a cost of ₹ 5.98 crore in December 2006. The preliminary estimated cost of the stadium of ₹ 297.45 crore was approved by the GNCTD Cabinet in September 2007, and detailed estimates for 23 works were approved by PWD, GNCTD for ₹ 250.86 crore from September 2007 to January 2010. Against awarded cost of ₹ 297.98 crore of these works, payment of ₹ 307.69 crore had been made to the contractors till October 2011.

The main works for structures under packages I and II were awarded to JMC Projects (India) Ltd. at costs of ₹ 103.96 crore and ₹ 108.80 crore. The work of package-I was completed in April 2009 at a total expenditure of ₹ 112.09 crore while under package-II, an amount of ₹ 112.29 crore had been paid till October 2011.

3.3.1.3 Inflation of costs in detailed estimates

The CPWD Manual provides that percentage rate tenders should be resorted to only when the major part of the estimated cost put to tender is based on the DSR, irrespective of the value of the tenders. However, PWD, GNCTD adopted a percentage rate tender, although more than 80 *per cent* of the cost for the two packages were for non-DSR items. Since the bidder is asked to quote a single percentage rate and does not have an option of quoting different percentages for different items, any error leading to an increase in the estimated cost of an item cannot be easily factored into consideration by the bidder. Consequently, an inflated cost estimate provides a higher baseline for potential bidders. The following instances of inflation of costs in the detailed estimates were observed:

Table 3.4 – Instances of inflation of costs in the detailed estimates
(₹ in crore)

Item	Escalation in Cost Estimate
Adoption of incorrect exchange rate (₹ 43/ US\$ instead of ₹ 40.28/ US\$) in computing cost of imported structural steel	1.41
Adoption of higher wastage rate of 10 <i>per cent</i> (instead of 5 <i>per cent</i>) for fabrication and commissioning of trusses	2.14
Inflated estimation for Kalzip roofing @ ₹ 5627.77/ sq.m. The contractor engaged another agency to execute the item @ ₹ 4393/ sqm. Even after including CPOH ⁸ of 10 <i>per cent</i> , the actual market price would be only ₹ 4832.30/ sqm.	0.87

GNCTD stated in its reply that there is no inflated estimation; however, the estimated rates cannot affect the quoted rates which the contractors quote on the basis of their own assessment of the market. As such, there is no loss to the government. The reply of GNCTD is not acceptable as this was a percentage rate tender, and the estimate was prepared based on market rate which itself was inflated. Accordingly contractor quoted rates on the basis of these estimates resulting in loss to government.

3.3.1.4 Higher cost item for detailed estimates/ execution

Audit found the following instances of adoption of higher cost items for detailed estimates and execution from among the options provided by the

⁸ Contractor's Profit and Overheads

consultant in the preliminary estimates (which included lower cost items):

Table 3.5 – Instances of adoption of higher cost items

(₹ in crore)	
Item	Escalation in Cost Estimate
Use of costlier acoustic false ceiling (Sonapanel brand) costing ₹ 4208.30 / sqm against the alternative costing ₹ 1650/ sqm	1.85
Use of more expensive nylon, fire retardant carpet (of “Milliken” make), rated as moderate duty, costing ₹ 5464.30/ sqm against the estimated cost of ₹ 1539.70/ sqm for heavy duty usage	0.70
Use of costlier toilet partitions (Merino Titan Series Cubical boxes) costing ₹ 19,556/ sqm against the estimated cost of particle board partitions of ₹ 792.60/ sqm and laminated glass partitions costing ₹ 18,300/ sqm.	1.00
Installation of composite panels of paper towel dispenser, hand dryer and waste paper bins (D-Line make) in toilets @ ₹ 2.42 lakh	0.37

GNCTD stated that it is their responsibility to examine technically the options proposed by the consultant on relative merits and demerits instead of blindly choosing the cheaper option and they had executed items found more suitable. Reply of the GNCTD is not convincing, as the appointed consultant had proposed the items after considering the suggestions given by the OC in their venue brief and also considering all technical aspects of the items. The department had however chosen to go with the costlier item, thus not ensuring economy.

3.3.1.5 Overpayments to the contractor (JMC Project)

Audit observed the following overpayments to the contractor:

- There was inadmissible payment of ₹ 3.03 crore separately for plates, nuts and bolts in steel work (trusses), in addition to payment for actual length of pipe, which already included costs of plates, nuts and bolts. The GNCTD stated that bearing and truss are different structural elements and as such the sliding plates and bolts are payable separately. The agency had claimed ₹ 150.38 per kg for these elements vide their letter. However, after pursuance by the department, the agency had agreed to execute this part under item 8.1 i.e. ₹ 133 per kg, which is on the lower side, claimed by the contractor as extra item. The reply is not acceptable as being a complete item the “other component” is included in the rate for truss. The version of department is not evident from

nomenclature or any other provision of the agreement and the letter for extra item from the contractor is a later development, not on record at the time of audit.

- There was avoidable payment of ₹ 2.51 crore for plates, nuts and bolts in other item of steel works (purlins) due to not specifying the mode of measurement for payment, as was done in the case of steel work for trusses; and non adoption of uniform mode of measurement and payment. GNCTD stated in its reply that payment for steel structures has been correctly made under this item as per the special conditions attached with the agreement and no over/avoidable payment has been made. The reply is not acceptable as both the items are related to structural steel and difference was only in the origin i.e., one was Indian and the other imported. By adopting two types of measurement methods department suffered a loss of ₹ 2.50 crore.
- Para 2.4 of minutes of pre-bid meeting for phase –I (structure) works held in September 2007 states that-“The quoted rate shall be inclusive of all duties and taxes applicable on the date of receipt of tender. If there is any increase in duties or taxes after date of receipt of tender, it shall be reimbursed on production of documentary evidence if actually paid by the contractor. If there is any decrease in duties or taxes after last date of receipt of tender, same shall be recovered from the contractor’s bill”. However, audit revealed that the custom duty on steel was reduced in the Finance Act 2008-09, but no deduction for such reduction of duty was made from the contractor. This has resulted in an excess payment of ₹ 0.33 crore to the contractor on account of reduction in customs duty on steel. GNCTD stated that the amount recoverable was only ₹ 0.29 crore but no documentary evidence was produced to Audit.

3.3.1.6 Specifying a richer/ higher specification

Audit scrutiny revealed that costlier acoustic wall panelling (using perforated ACP) was executed even outside the Field of Play (FOP) over the corridor and external concourse, instead of applying plaster and plastic paint (as done in the VIP area); this resulted in extra cost of ₹ 1.24 crore.

In its reply GNCTD stated that the selection of type and location of wall panelling has been done judiciously, considering the requirement of acoustics, type of users of a particular area and its surrounding area. Reply of the GNCTD is not acceptable as department executed the acoustics wall panelling on both sides of the wall. The FOP area was fully covered with costly Sona panel and acoustic doors to prevent noise level from outside. Thus, the use of high cost acoustic paneling on wall of open area (concourse/corridor) was not justified.

3.3.1.7 Procurement of Items by specifying a single Brand

Audit scrutiny revealed that 31 items valuing ₹ 24.28 crore (**Annexure 3.3**) were included in the detailed estimates by specifying either a single brand by name, or stating the requirement as *brand "X" or equivalent*. These items were included as per the recommendations of the consultant and rate of these items decided/ analysed on the basis of single quotations. No justification was recorded for specifying the brand. Some examples of rates of single brand used for preparation of estimates are as under:

Table 3.6 – Examples of rates of single brand used for preparation of estimates

S.No.	Name of item	Brand of item	Rate of procurement (₹ per unit)
1	Hall wall hung WC. pan, seat with cover,	Roca	21,067
2	Concealed cistern	Geberit	8,254
3	Duo fix mounting element	Geberit	6,213
4	Single urinal basin with PVC 6 lts. auto flushing cistern	Roca	34,524
5	Wash basin including Sensotronic sensor faucet	Roca, Duravit, Jaguar	27,540
6	Paper towel dispenser, Hand dryer, Waste paper bin	D-line	2,41,813
7	Blower/ hand dryer	GEM or equivalent	24,356
8	Paper towel dispenser	D-line or equivalent	33,835
9	Paper waste bin	D-line or equivalent	30,445

Further, payment of ₹ 18.22 crore was made on execution of 23 items of the same brand as specified in the Bill of Quantity (BOQ) and three items worth ₹ 3.50 crore were executed as equivalent brands. Five items specified with the brand name were not executed. Thus, restricting these items to specific brands resulted in reduced competition with consequential increases in project cost.

In its reply GNCTD stated that while granting sanction to the Project, the Cabinet of GNCTD had directed that the venue should be constructed with world class specifications. Accordingly, based on the importance of the area, the specifications were decided. The reply of the GNCTD is not convincing as

department used richer specification in case of ACP panelling, toilet partition and fitting, carpet, flooring tiles, roofing, wooden blinds etc. in common area also.

3.3.1.8 Blockage of funds of ₹ 22.14 crore on installation of gas turbine

The venue brief for Thyagaraj stadium stipulated power supply from two independent feeders and power backup for critical supplies. Instead, PWD went in for two additional power generation units i.e. Solar power plant and dual-fuel gas turbine. Audit of the projects revealed the following deficiencies:

- A 2.5 MW dual-fuel gas turbine was awarded at a cost of ₹ 19.58 crore and an add-on Vapour Absorption Machine (VAM) at a cost of ₹ 2.83 crore; in addition, these works were awarded on single tender basis to Turbomach India Pvt. Ltd.
- Along with turbine, decision was also taken to install VAM, an energy efficiency booster, which could work only with gas turbine, taking total capital investment cost to ₹ 22.41 crore. The stated reason for selection of gas turbine was the green attribute, environmental friendly nature of gas turbine.
- The VAM increases the efficiency of the turbine by extracting heat from the exhaust. The VAM can save electricity of about 650 KW, equivalent to ₹ 3,380 per hour⁹. However, during each hour of operation, the turbine also incurs a loss of ₹ 1740 per hour¹⁰ by generating power at a rate of ₹ 6.07 against grid supply of ₹ 5.2, making the whole installation including VAM of ₹ 22.41 crore, uneconomical.
- Since commissioning of turbine, 121075 KWH units have been fed to the grid (November 2010). No Power Purchase Agreement for the power generated was in place.

In its reply GNCTD also stated that the government is promoting environment friendly technologies and green building construction. Use of Gas Turbine Generating Set in combination with VAM (which provides air conditioning by use of exhaust smoke from gas turbine) is a step in furtherance to the same policy. The fact is that the gas turbine was run only during the Games and since then not a single unit had been generated from the gas turbine. Further without VAM when the air conditioning is not used the rate of power generation would be higher at ₹ 8.73.

⁹ ₹ 5.20 per unit cost of electricity from grid X 650 KW which is net power saved by VAM=₹ 3380 per hour

¹⁰ ₹ 6.07- 5.2= ₹ 0.85 per KW X 2000 KW /hr= ₹ 1740 per hour

3.3.2 Construction of Chhatrasal Stadium



Chhatrasal Stadium

3.3.2.1 Overview

Chhatrasal stadium was to be upgraded as a training venue for athletics. The estimated cost of ₹ 83.00 crore was approved by the GNCTD Cabinet in August 2008, and detailed estimates of ₹ 55.87 crore were approved by PWD in December 2008. Benjamin, Benjamin and Vats were appointed in March 2008 as the design consultant at a cost of ₹ 1.33 crore. The main work for the structure was awarded to Era Infra Engineering in January 2009 for ₹ 60.26 crore. Payment of ₹ 55.37 crore had been made up to October 2011 to the contractor.

3.3.2.2 Appointment of consultant

Audit observed the following in the appointment of Benjamin, Benjamin and Vats as the design consultant:

- The condition of relevant experience vis-a-vis sports venues in the NIT was removed at the Press Notice stage;
- Different weightages for criteria for technical evaluation were used for the Chhatrasal Stadium (as compared to the Thyagaraj Stadium).
- Four firms participated and two firms with the minimum qualifying

marks of 70 qualified as given below:

Sl. No.	Points evaluated for	M/s Enarch Consultants Pvt. Ltd.	M/s Benjamin Benjamin & Vats	M/s A.G. Krishna Menon	M/s Kapoor & Associates
1	Firms' relevant experience and strength (25)	22	15	13	17
2.	Experience of the key personnel deployed (15)	12.5	10.5	12.5	12.5
3.	Technical proposal (Presentation) (60)	20	49.5	46.5	30
	Total	54.5	75	72	59.5

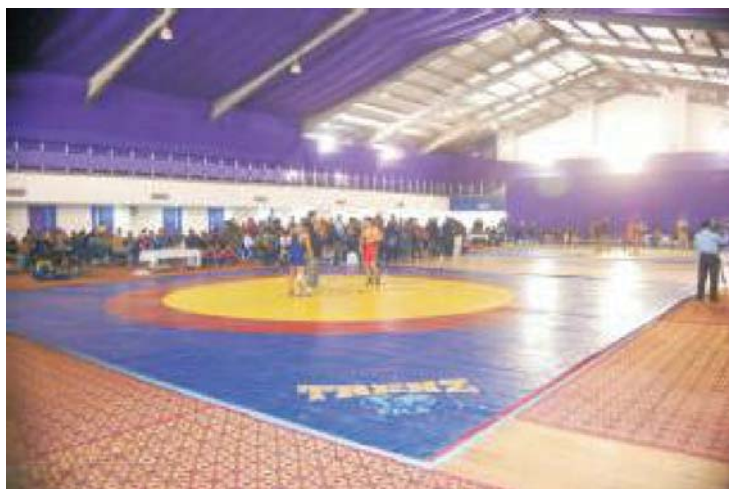
It was observed that that department had used the same technical parameters for evaluation of consultant in Thyagraja stadium, but used different weightages. A comparative tabulation of weightage is shown below:

S. No.	Points evaluated for	Thyagraja Stadium	Chhatrasal Stadium
1	Firms' relevant experience and strength	25	25
2.	Experience of the key personnel deployed.	60	15
3.	Technical proposal (Presentation)	15	60

Less weightage was given to experience of key personnel as can be seen from the table. If the weightages had been adopted as for Thyagaraj Stadium, Benjamin, Benjamin and Vats would not have been technically qualified.

GNCTD stated that the criteria fixed for evaluation of technical bid was approved by E-in-C and the word "sports venue" was inadvertently left out in condition of NIT. However, this had no effect on the bidding process as the bid documents were sold to the intending bidders based upon the eligibility criteria mentioned in the press notice. In addition to use of different eligibility criteria, GNCTD stated that as the requirements of the two venues were quite different, same criteria for evaluation could not be applied. The reply is not acceptable as consistent criteria should have been adopted for consultant evaluation in the interest of transparency which would have resulted in selection of a consultant who had experience in sports venues.

3.3.3 Construction of Training Venue at Ludlow Castle



Training venue at Ludlow Castle School

Government Model Ludlow Castle School No. 2 was selected as a training venue for wrestling. AG Krishna Menon was appointed as the design consultant at a cost of ₹ 0.60 crore in December 2007. Estimated cost of ₹ 20.33 crore was approved by the GNCTD Cabinet in November 2008, and detailed estimates of ₹ 9.34 crore approved by PWD in December 2008. The work was awarded (January 2009) to Arora Construction Company Private Ltd. at ₹ 11.25 crore.

Audit observed that for award of design consultancy, procedure of calling Expression of Interest was not followed and limited tenders were called, on account of shortage of time. However, although the consultant appointment committee had approved the proposal for appointment in August 2007, the work was awarded to AG Krishna Menon only in December 2007, belying the sense of urgency.

In its reply GNCTD stated that the short listed consultants/architects were quite capable of providing the consultancy of such type of building. Therefore, the offer from the panel of approved architects was called. The reply of GNCTD is not acceptable as even though limited tender process was adopted due to shortage of time, yet the department had spent about six months in the process of award of work only.

Further, Audit observed that the tendered amount of construction work ₹ 11.25 crore was 32 *per cent* above the estimated cost of ₹ 8.50 crore. For this purpose, a justified cost of ₹ 10.50 crore was arrived at. Audit found undue inflation of the justified cost by ₹ 0.96 crore on account of miscellaneous charges (already included in CPOH) and higher justification

rate of structural steel (compared to the same items for Chhatrasal stadium). Thus, the work was awarded at 17.92 *per cent* above the justification cost.

GNCTD stated that the time period was kept as eight months for the work, to be completed well before beginning of Commonwealth Games to start training etc. in time. The addition of extra cost for working at odd hours, over and above the rates is also supported by paragraph 19.4.3.1 of CPWD Works Manual-2007. The reply of the GNCTD is not convincing as adding the extra amount in justification cost on account of miscellaneous charges in addition to 15 *per cent* contractor's profit (includes 7.5 *per cent* amount of miscellaneous charges) is not correct and expenditure on providing the staff car, telephone etc. to PWD staff should be met out of the contingencies of the work. On higher justification rate of structural steel the GNCTD stated that the market rate of similar items of both the stadia was same and justification prepared by the department was correct. The reply is not acceptable, as Audit had compared the justification rate of only DSR items of both the agreements and department has adopted the justification rate of non DSR items of Chhatrasal stadium.

3.4 Extra expenditure on extra, substituted and deviated items on venues

The extent of extra, substituted and deviated items in the seven works (with tendered cost of ₹ 516.71 crore) reviewed by Audit, is summarized below:

(₹ in crore)	
Category	Amount
Extra items	15.13
Substituted items	8.34
Deviated items	43.72

The details of extra items, substituted items and deviated items in different works, along with audit remarks, are given in **Annexure 3.4**.

In both Talkatora Stadium and Shivaji Stadium atleast six extra/substituted items worth ₹ 9.97 crore (**Annexure 3.5**) were executed because the architect consultant had not prepared the design and estimates correctly. Adequate penal provisions had not been incorporated in the agreement as per Central Vigilance Commission (CVC) guidelines to exercise control over the consultant.