CHAPTER III

INTEGRATED AUDIT OF A GOVERNMENT DEPARTMENT

PUBLIC WORKS DEPARTMENT (BUILDINGS)

3.1 Integrated Audit of the Public Works Department (Buildings)

Highlights

The mandate of the Public Works Department (Buildings) is to plan, design and construct residential and non-residential buildings for Government departments and maintain them in good condition. An integrated audit of the department revealed various deficiencies such as inadequate provision of funds in budgets for Plan works, unrealistic budgeting, partial availing of Twelfth Finance Commission grants, overpayments and avoidable expenditure in the construction of the Tamil Nadu Assembly building. The important audit findings are given below:

- **Out of ₹ 282.53 crore allocated to Tamil Nadu by the Twelfth Finance Commission for maintenance of buildings and heritage conservation during 2005-10, the State could not avail of ₹ 62.11 crore during the period 2005-10.**

(Paragraph 3.1.7.2)

- **Budgeting was unrealistic as there were large-scale re-appropriations under the grant and persistent savings were noticed under the minor head 'Direction and Administration'.**

(Paragraphs 3.1.7.3 and 3.1.7.4)

- **Government of India grant of ₹ 8.85 crore could not be availed of for construction of hostels for Backward Class students.**

(Paragraph 3.1.7.7)

- **The pattern of response to tender calls in the test-checked divisions was indicative of cartel formation among contractors.**

(Paragraph 3.1.8.1(i))

- **Provisions of the Tamil Nadu Transparency in Tenders Act and Rules were not followed in award of contract for providing architectural services for construction of the Assembly building.**

(Paragraph 3.1.8.2(i))

- **Construction of a temporary dome for the purpose of inauguration due to delay in construction of the permanent dome of the Assembly building resulted in wasteful expenditure of ₹ 3.28 crore.**

(Paragraph 3.1.8.2(ii))

- **Wrong measurement in pile foundation of the Assembly building resulted in overpayment of ₹ 2.46 crore to contractors.**

(Paragraph 3.1.8.2(iii))

- **Non-adoption of revised specifications of the Bureau of Indian Standards in usage of cement in concrete works resulted in avoidable expenditure of ₹ 3.54 crore.**

(Paragraph 3.1.8.3)

- **Environment-friendly materials like fly-ash bricks, crush stone sand were not used in works.**

(Paragraph 3.1.8.5)

3.1.1 Introduction

The Public Works Department (PWD) is responsible for planning, designing and carrying out construction of public buildings and allied works in accordance with the needs and requirements of various Government Departments. PWD is also responsible for maintaining both Government residential and non-residential buildings including provision of electrical amenities and their maintenance.

3.1.2 Organisational set-up

The Secretary, Public Works Department is the administrative head at the Government level. The Chief Engineer (CE) (Buildings), PWD is the head of the department. The CE is assisted by one Joint Chief Engineer (Buildings), two Deputy Chief Engineers (one each for the Buildings and Electrical wings), the Superintending Engineer (SE), Planning and Designs and the Chief Architect. At the field level, there are 15 SEs assisted by 40 Executive Engineers (EEs) and eight Electrical Engineers (El.Es). An organogram of the department is given in **Appendix 3.1.**

3.1.3 Audit objectives

The objectives of integrated audit were to assess whether

- the department had a proper system of planning;
- the budget estimates were reliable and the financial management was adequate and effective;

- various programmes/ schemes of the department were being implemented economically and effectively and
- internal controls and monitoring were adequate.

3.1.4 Audit Criteria

The audit criteria against which the audit objectives were assessed are given below:

- Plan documents;
- The Tamil Nadu Budget Manual and other Codes and Manuals of the department;
- The Tamil Nadu Transparency in Tenders Act, 2000 and
- Orders issued from time to time by the Government /Department and accepted best practices in the field.

3.1.5 Audit coverage and methodology

The integrated audit was conducted during February to July 2010 covering the period 2005-10. Records of the department in the Government Secretariat, office of the CE and 13 out of 17 Circles were test-checked. Out of 39 Construction and Maintenance Divisions, 10 were selected adopting the stratified random sampling method. In addition, five more divisions were also taken up for review based on the magnitude of expenditure. The list of test-checked units is given in **Appendix 3.2**. Audit objectives and criteria were discussed with the CE in an entry conference held in February 2010. The audit findings were discussed with the Principal Secretary to Government, Public Works Department in an exit conference held in September 2010 and his views have been incorporated in the report at appropriate places.

Audit Findings

3.1.6 Planning

The audit period covered the last two years of the Tenth Five Year Plan and the first three years of the Eleventh Five Year Plan period. A review of the Plan documents, budget provisions and expenditure revealed the following:

3.1.6.1 Under-achievement during the tenth plan

As against the approved Annual Plan outlay of ₹ 149.05 crore pertaining to last two years of the Tenth Five Year Plan, budget provision was made for ₹ 96.06 crore only and expenditure of ₹ 40.44 crore was incurred. The shortfall in budget provision/expenditure was due to provision of funds under the revenue demand and non-approval of the construction of building for the Judiciary Department by Government.

3.1.6.2 Progress of Eleventh Five Year Plan

As against the approved annual Plan outlay of ₹ 482.23 crore for the period 2007-10, budget provision of ₹ 648.30 crore was made. The excess budget provision was mainly due to provision of ₹ 75 crore and ₹ 200 crore made for construction of the Assembly complex. Three schemes[1] costing ₹ 5 crore each relating to PWD were not taken up for execution as Government had not approved the schemes. Plan outlay of ₹ 10.80 crore relating to the Health Department and ₹ 10 crore for Renovation of Heritage Buildings was still to be utilised.

The CE stated (September 2010) that the schemes were likely to be taken up in the forthcoming year after sanction of the Government.

3.1.7 Financial management

Details of budget provisions and expenditure under revenue and capital accounts under Non-Plan and Plan heads in the PWD grant during 2005-10 are given in **Table 1.**

Table 1: Details of revenue and capital expenditure

(₹ in crore)

Year	Revenue Expenditure		Capital Expenditure		Total	
	Budget provision	Expenditure	Budget provision	Expenditure	Budget provision	Expenditure
2005-06	102.67	98.87	257.62	292.60	360.29	391.47
2006-07	111.94	105.53	248.21	216.43	360.15	321.96
2007-08	131.93	106.44	304.13	206.43	436.06	312.87
2008-09	151.17	132.20	502.58	234.17	653.75	366.37
2009-10	151.16	138.70	790.47	777.97	941.63	916.67
Total	**648.87**	**581.74**	**2,103.01**	**1,727.60**	**2,751.88**	**2,309.34**

(Source: Detailed Appropriation Accounts)

Capital expenditure showed a declining trend from ₹ 292.60 crore in 2005-06 to ₹ 206.43 crore in 2007-08 and thereafter, increased due to construction of the Legislative Assembly building. Reasons for the decline in expenditure under Capital account during 2005-06 to 2007-08 were not furnished by the department.

[1] (i) Revamping the monitoring system for quality control and testing
(ii) Providing additional computers for the Building organisation
(iii) Establishment of Tamil Nadu Construction Academy

3.1.7.1 Inadequate budget provision for Plan works

Budget provisions are to be made based on the financial requirements of the schemes included in the Annual Plans and spill-over works. The details of the total approved Annual Plan provisions for buildings under the sectors Commercial Tax, Health, Heritage Conservation, Home, Judiciary, Police, Public Works, Revenue and Tsunami Relief; budget provisions made and the actual expenditure during 2005-10 are given in **Table 2.**

Table 2: Details of Plan outlay, budget provisions and expenditure

(₹ in crore)

Year	Provision in Annual Plan	Budget provision	Actual expenditure	Savings/Excess
2005-06	68.16	66.43	7.49	(-) 58.94
2006-07	80.89	29.63	32.95	(+) 3.32
2007-08	174.53	104.18	52.91	(-) 51.27
2008-09	137.69	203.07	72.28	(-) 30.79
2009-10	170.01	341.11	286.18	(-) 54.93
Total	**631.28**	**744.42**	**451.81**	**(-) 292.61**

(Source: Annual Plans and Detailed Appropriation Accounts)

Budget provisions were not commensurate with Plan outlays

It was noticed that there were huge differences between the approved Annual Plans and the budget provisions made in all the five years. The excess budget provisions over the Plan outlay during 2008-09 and 2009-10 were mainly due to provisions of ₹ 75 crore and ₹ 200 crore made for construction of the Assembly complex. Even the reduced budget provisions were not spent by the department in full and there were huge savings, except during 2006-07.

The CE admitted (September 2010) the shortfall/excess and stated that the State Planning Commission/Finance Department would be addressed in this regard. The department attributed the shortfall in expenditure to their inability to finalise the agencies for the works due to the abnormal fluctuation in the cost of construction materials during 2005-06 to 2007-08. The reply is not acceptable as the Schedule of Rates is revised annually and the contractors submit bids with tender premia, taking into account the market rates and profit margins.

3.1.7.2 Twelfth Finance Commission grants

Twelfth Finance Commission grants were not availed of to the extent of ₹ 62.11 crore

The Twelfth Finance Commission (TFC) recommended grants-in-aid of ₹ 242.53 crore for maintenance of public buildings and ₹ 40 crore for heritage conservation during the period 2005-2010 to the State. Based on utilisation certificates furnished by the State, GOI reimbursed ₹ 121.27 crore for maintenance of public buildings and ₹ 17.80 crore for heritage conservation up to June 2010. TFC grants of ₹ 62.11 crore could not be availed of by the State for the reasons stated below:

(i) According to the guidelines issued by TFC, only non-salary maintenance expenditure on non-residential public buildings was eligible for reimbursement from GOI in two instalments in a year. While there were no preconditions for release of the first instalments of the grant, release of the second instalments was on fulfilment of conditions laid down in the guidelines. Test check revealed that the second instalments of the grant for the years 2007-08 and 2008-09 amounting to ₹ 60.63 crore was not reimbursed (June 2010) by GOI as the State had not incurred the projected Non-Plan revenue expenditure during 2006-07 and 2007-08.

(ii) The Government sanctioned (December 2007) rehabilitation of heritage buildings under TFC grant at an estimated cost of ₹ 3.50 crore[2]. The estimate for the Old Revenue Building was sanctioned only in September 2008 after a delay of nine months. Though the tender was opened in November 2008, the pre-qualification (PQ) bids were approved and the price bids opened by the CE only in January 2009. Since the L1 tenderer was debarred by the Airports Authority of India (January 2009), the tender submitted by the L1 tenderer for the above work was cancelled by CE in July 2009. In order to avail of the grant, the Government sanctioned (January 2010), ₹ 1.33 crore for rehabilitation and restoration of the Anatomy Block in the Madras Medical College, Chennai in lieu of the Old Revenue Building. As the CE expressed his inability to complete the above work before March 2010, i.e., the date of closure of the TFC, grant to the extent of ₹ 1.48 crore (excluding ₹ 16 lakh spent on civil/electrical works) lapsed during that year, which was a loss to the State Government.

The department stated (September 2010) that the contractors were not willing to participate in the tenders as specific care, attention and professional expertise were required for carrying out works in heritage buildings and the departmental rates were not commensurate with the market rates. It was also stated that the Government would be addressed for getting reasonable rates for carrying out these special items of work in future. The reply was not acceptable since the department was able to execute the other two works[3] on heritage buildings.

3.1.7.3 Defective budgeting

Test check of records of the CE showed persistent savings under the minor head ‘Direction and Administration’ under the major head ‘Buildings’ as indicated in **Table 3.**

[2] Old Revenue Building: ₹ 164 lakh; Old Engineering college Buildings: ₹ 90 lakh; Public Works Department Building: ₹ 96 lakh

[3] Old Engineering college Buildings and Public Works Department Building

Table 3: Details of persistent savings

(₹ in crore)

Year	Budget Provision	Expenditure	Savings
2005-06	65.85	59.65	(-) 6.20
2006-07	74.85	66.34	(-) 8.51
2007-08	94.01	68.47	(-) 25.54
2008-09	110.95	95.97	(-) 14.98
2009-10	111.66	101.96	(-) 9.70

(Source: Detailed Appropriation Accounts)

One of the reasons for the persistent savings under the minor head was provision of funds even for the vacant posts under 'Salaries'.

The department stated (September 2010) that budget provision for vacant posts were made as per Government guidelines. However, no Government orders/guidelines permitting such practice were made available to Audit.

3.1.7.4 Re-appropriations

A review of the budget provisions made at the sub-head level showed that re-appropriations at the year end, were carried out during 2005-10 as shown in **Table 4.**

Table 4: Details of re-appropriations made

Year	Total units of appropriation (sub-heads)	Number of units in which re-appropriations were made
2005-06	162	104
2006-07	141	73
2007-08	106	81
2008-09	103	78
2009-10	105	76

(Source: Detailed Appropriation Accounts)

It could be seen from the above that there were large scale re-appropriations in units ranging from 52 *per cent* to 76 *per cent* which indicated that the preparation of budgets was unrealistic.

3.1.7.5 Diversion of letter of credit

The Finance Department instructed that letters of credit (LoC) authorised to the divisions, be utilized only for the purposes for which they were sought. They were not to be drawn for works for which sufficient budget provisions were not available or for which administrative sanctions were not issued. Further, the unspent LoC available at the end of the year under a particular head of account was not to be utilized for payments under other heads of account.

Test check of records of two[4] out of 15 test-checked divisions revealed that as against LoC of ₹ 7.34 crore authorised during 2005-06 to 2008-09, the divisions spent ₹ 7.78 crore. This was done by utilising the savings available in LoCs under other heads of account which was against the instruction of the Finance Department.

3.1.7.6 Rush of expenditure

According to the Tamil Nadu Budget Manual, expenditure should be incurred in a phased manner throughout the financial year and rush of expenditure at the end of the year should be avoided. Test check of records revealed that expenditure in March ranged between 26.78 *per cent* to 42.45 *per cent* as indicated in **Table 5.**

Table 5: Expenditure during March

(₹ in crore)

Year	Total expenditure for the year	Expenditure incurred in March	Percentage
2005-06	213.52	83.00	38.87
2006-07	262.82	111.58	42.45
2007-08	203.64	65.62	32.22
2008-09	238.75	97.50	40.84
2009-10	472.67	126.57	26.78

(Source: Divisional Accounts)

It was also noticed that allotment of LoC was made by the Finance Department even on 30th and 31st of March of the financial year.

The department stated (September 2010) that action would be taken to avoid this in future.

3.1.7.7 Non-availing of Government of India grant

Government of India (GOI) proposed to release grants at 50 *per cent* of the cost of construction of hostel buildings for Other Backward Classes under the schemes shared between the State and the Centre. To avail of the Central grant, the State Government sent (November 2006, June 2007 and July 2008) proposals to GOI for construction of 126 hostels. GOI had approved 76 hostels only and sanctioned ₹ 11.97 crore towards its 50 *per cent* share for the years 2006-07 to 2008-09 with a condition that the works should be completed within two years from the date of sanction.

---

[4] Construction & Maintenance Divisions at Thirunelveli and Villupuram

Test check of records of the CE revealed that out of 76 hostels, 29 hostels **(Appendix 3.3)** were completed and handed over to the user department even before the date of sending proposals to GOI, 31 hostels **(Appendix 3.4)** were completed before the issue of orders (April 2007, March 2008, December 2008 and August 2009) by Government of Tamil Nadu for taking up the construction under the Centrally shared scheme and 16 works **(Appendix 3.5)** were in progress at the time of issue of the Government orders. While issuing the orders, Government of Tamil Nadu instructed the CE to transfer the expenditure already incurred under State Plan heads to the Centrally shared scheme head. As the works were already completed, expenditure of ₹ 6.24 crore only was transferred by the divisions concerned. Thus, Government could avail of only ₹ 3.12 crore (50 *per cent* of ₹ 6.24 crore) as against the sanction of ₹ 11.97 crore due to inclusion of completed/ongoing Plan works, instead of taking up new works resulting in non-availing of GOI grant of ₹ 8.85 crore.

The department attributed the booking of expenditure and the consequent non-availing of grant to the policy decision of Government to transfer the expenditure relating to the State Plan scheme to the Centrally shared scheme. However, the wrong decision led to non-availing of GOI grant fully.

3.1.8 Programme Management

The department constructs buildings under State Plan/Centrally sponsored or shared schemes as also deposit works. Important audit points noticed under programme management are discussed below.

Details of the number of works sanctioned and completed by the department during 2005-10 are given in **Table 6.**

Table 6: Number of works sanctioned and completed

(₹ in crore)

Year	No. of works sanctioned	No. of works completed
2005-06	1,876	1,365
2006-07	2,874	1,965
2007-08	2,005	2,123
2008-09	2,497	2,156
2009-10	2,679	2,201
Total	**11,931**	**9,810**

(Source: Statistics furnished by the department)

3.1.8.1 Tenders and contracts

(i) Poor participation in tenders

The pattern of response to tender calls was indicative of cartel formation

The department follows the provisions of the Tamil Nadu Transparency in Tenders Act in calling for tenders for the works and selection of agencies. Review of tender registers of the 12[5] out of 15 the test-checked divisions revealed that response to tender calls were only from a very few contractors. A number of contractors participated as pairs in tender. Audit noticed that out of 17,513 tenders invited during 2005-10, single tenders and two tenders were received in 25 cases and 17,110 cases respectively as detailed in **Table 7.**

Table 7: Response to tenders

Year	No response/ cancelled	Single tenders	2 tenders	3 to 5 tenders	More than 5 tenders	Total	Percentage of two tenders
2005-06	55	3	3,436	156	35	3,630	94.66
2006-07	76	2	3,422	21	0	3,445	99.33
2007-08	89	1	3,152	13	0	3,166	99.56
2008-09	52	1	3,245	10	5	3,261	99.51
2009-10	78	18	3,855	80	58	4,011	96.11
Total	**350**	**25**	**17,110**	**280**	**98**	**17,513**	**97.70**

(Source: Tender Registers)

Even though the number of registered contractors at the divisional level was more, the fact that only two contractors had participated in 17,110 out of 17,513 tenders and also in pairs on a number of occasions was indicative of cartel formation among the contractors.

The Principal Secretary expressed (September 2010) the inability of the department to improve the contractors' participation in tenders and accepted the chances of cartel formation.

(ii) Delay in finalisation of tender

According to Government orders[6], the time limits fixed for evaluation of tender by SE and CE and acceptance of tender by the Tender Award Committee (TAC) were 15 days, 7 days and 30 days respectively. In respect of World Bank-aided schemes, GOI prescribed (February 1997) a time limit of 60 days from the date of opening of bids for tenders whose bid validity was up to 90 days. Test check revealed that SE and CE had not observed the

[5] Construction & Maintenance Divisions at Ariyalur, Dharmapuri, Marina, Pudukkottai, Salem, South Presidency, Thirunelveli, Thiruvallur, Thiruvarur, Trichy, Villupuram and Virudhunagar.

[6] G.O.Ms.No.873, Public Works Department, dated 4.5.1982 and G.O.Ms.No.490, Finance (Salaries) department, dated 11.9.1998

stipulated time for evaluation of bids in two works[7] resulting in backing out by contractors after the expiry of validity period and consequent extra expenditure of ₹ 1.77 crore on retendering.

The department stated (September 2010) that the delay was unavoidable due to the process involved and that the contractors were not willing to extend the validity due to increase in cost of material at that time. The reply was not acceptable as the tenders could have been accepted before the expiry of validity period.

(iii) Non-revision of monetary limit for tender acceptance

The monetary limits for tender acceptance by various authorities in PWD were fixed in March 2000. In view of an appreciable increase in the cost of building materials and labour over the years, the Board of Engineers forwarded a proposal (August 2009) to the Government for enhancing the monetary limits of the authorities for accepting tenders. No decision had been taken so far in this regard. Details of the number of tenders accepted by the SE/CE/TAC are given in **Table 8.**

Table 8: Details of number of tenders accepted

Year	By SE	By CE	By Tender Award Committee (TAC)
2005-06	NA	302	37*
2006-07	391	324	81
2007-08	204	84	95
2008-09	264	149	270
2009-10	309	78	509

* From June 2005 NA: Not Available

(Source: Statistics furnished by the department)

It may be seen from the table that the number of tenders decided by the TAC had increased by 628 *per cent* during 2006-07 to 2009-10.

The department stated (September 2010) that the proposal for upward revision of the monetary limit for acceptance of tender was under consideration of the Government.

(iv) Non-operation of price adjustment clause

The Government issued (March 2008) orders for adoption of the price adjustment clause in contracts with agreement periods of 12 months and below. Accordingly, price adjustment clauses were included in such bid documents and agreements.

[7] (i) Construction of DMS Annexe Building at DMS Campus, Chennai
(ii) Construction of Taluk Office Building at Kariyapatti in Virudhunagar District

As seen from the monthly wholesale price index released by RBI for steel, the cost of iron and steel decreased steeply during the year 2009 compared to their cost in 2008. Test check of records of Virudhunagar Division revealed that, though a price adjustment clause was included in the agreements, the same was not operated before making final payment in respect of seven works. The non-operation of price adjustment clause before making final payment had resulted in excess payment to contractors to the tune of ₹ 22.97 lakh.

(v) Non-availing of central excise duty exemption

Failure to avail of excise duty exemption led to extra cost of ₹ 4.44 crore

As per a Central excise notification (August 1995), goods intended to be supplied to projects financed by the international organizations including the World Bank are exempt from levy of the Central excise duty.

The Department undertook construction of buildings and other infrastructural facilities for the hospital buildings sanctioned under the World Bank assisted Tamil Nadu Health System Project (TNHSP). The materials procured or used in the works of TNHSP are eligible for availing of Central excise duty exemption. Test check revealed that the estimates of works taken up under TNHSP were prepared without considering the availability of Central excise duty exemption. Omission to consider the duty exemption while arriving at the estimate rate inflated the project/work cost by ₹ 4.44 crore being the excise duty levied on cement and steel used in these works.

The department stated (September 2010) that non-availing of exemption had not caused any revenue loss and the excise duty paid to Government of India would be shared by Central and State Governments. The reply was not tenable since the non-availing of exemption had increased the project cost and more works could have been taken up for execution with the savings had the exemption been availed of. It was also noticed that the Principal Secretary, PWD issued certificates to contractors for availing of Central excise duty exemption in respect of World Bank-aided irrigation project works.

3.1.8.2 Construction of Tamil Nadu Legislative Assembly Complex

Government accorded (July 2007) administrative sanction for ₹ 200 crore for construction of a new complex for the Tamil Nadu Legislative Assembly in Chennai. The administrative sanction was revised (October 2008) to ₹ 425.57 crore on account of technical sanction (₹ 347 crore) and tender premium (₹ 78.57 crore). To accommodate all other departments of the State Secretariat in the same location, Government sanctioned (May 2009) ₹ 279.56 crore for Block- B. The construction of Block-A commenced in November 2008 and was in progress (June 2010). The department incurred expenditure of ₹ 292.82 crore on the works up to June 2010. The major audit observations are as under:

(i) Award of contract for providing architectural consultancy services

Architectural services were awarded to a consultant violating the provisions of the Tamil Nadu Transparency in Tenders Act.

The Assembly complex was proposed to be constructed by procuring comprehensive architectural services which included, among other things, survey, design and preparation of detailed project report, assisting the department in tender processing and awarding of main and component works, periodic inspection and evaluation of project works, monitoring and reporting to the department and providing project completion report.

The pre-qualification notice for selection of firms was issued in July 2007 and seven firms were short-listed (September 2007) by an Evaluation Committee for the presentation of their design concepts and a German firm was selected by the Committee. The agreement for providing the consultancy services was concluded in February 2008 and the scale of charges payable to the consultant was five *per cent* of the actual project cost for all works except interior works for which it was 7.5 *per cent.* The services of the consultant were later extended (October 2008) to Block 'B', the auditorium complex, the guest house and multilevel car parking also on the same terms and conditions. The total payment made to the consultant for Block 'A' up to June 2010 was ₹ 10.32 crore and for Block 'B' it was ₹ 3.10 crore up to May 2010.

Scrutiny of the records revealed the following:

As per the Tamil Nadu Transparency in Tenders Act (TTTA), 2000 and Rules framed thereunder, both technical and financial bids were to be invited from the bidders for all works. It was noticed in audit that in the notice inviting tenders for prequalification of architects, instead of calling for financial bids, it was stated that the selected architects would be paid as per the scale of charges prescribed by the Council of Architecture (COA). Thus, the provisions of the Act and Rules were not complied with in procuring architectural consultancy services and the work was entrusted to the firm at five *per cent* of the project cost prescribed by the COA. It was also noticed that in respect of tendering for major projects including state-of-the art buildings, the departments of GOI/Public Sector Undertakings procured architectural consultancy services through open tenders with two cover system without mentioning the scale of charges of the COA. Extension of services of the consultant for Block 'B' and other buildings without inviting open tenders or architectural competition was in violation of the provisions of TTTA.

The department stated (September 2010) that calling for financial bids would be countered by the architects registered with the COA in a Court of Law citing the Architects Act, 1972 and Rules thereon. The reply is not acceptable as the Architects Act and Rules do not prohibit calling for financial bids and Government departments/Public Sector Undertakings/Statutory Boards call for both technical and financial bids for architectural services.

(ii) Wasteful expenditure on provision of temporary dome

Construction of temporary dome resulted in wasteful expenditure of ₹ 3.28 crore

The targeted date for completion of Block - 'A' was May 2010. The agreement provided for completion of structural civil works in all respects in 12 months i.e. by November 2009. The design for the dome, which was a main component, was completed by the consultant in August 2009 and the work of construction of dome was entrusted to another contractor in November 2009 for ₹ 17.80 crore. The agreement was signed in December 2009 only, due to delay in supply of detailed drawings of the dome by the consultant. In the meantime, Government fixed 13 March 2010 as the date of inauguration of the building. While accepting the fact that the structural dome could not be constructed before the inauguration date, the consultant advised (1 February 2010) the department to provide a prototype of the dome to study the dome profile and the finished effect and to have a better understanding of a large dome proposed to be constructed at a height of 100 feet. The work of construction of the temporary dome was entrusted (March 2010) to a firm without calling for tenders at a cost of ₹ 3.28 crore and got done. The prototype dome had to be provided due to the failure of the department in providing the permanent dome within the scheduled time. The design and sanctioned estimate for the permanent dome did not provide for provision of a temporary dome. Hence, the expenditure of ₹ 3.28 crore incurred on construction of the temporary dome proved wasteful.

The department stated (September 2010) that the permanent dome could not be constructed without studying and testing the wind effect, shape, etc. on such a huge structure. The reply is not acceptable as the consultant while furnishing the design of the dome initially had not suggested any such prototype. Moreover, the decision to construct the temporary dome was taken in February 2010 whereas the permanent dome work was entrusted in November 2009 itself.

(iii) Overpayment to contractor

As per the technical specifications and the nomenclature of the work provided in the original agreement, the length of piles was to be measured, for payment purposes, from the top of the pile shoe to the bottom of the pile cap. However, while changing the design of the pile foundation, the nomenclature of the work was changed in the supplementary agreement to effect payment for the length of the pile up to the natural ground level instead of up to the bottom of the pile cap. This resulted in overpayment to the contractor for the portion of the pile length over the bottom of pile cap level. The overpayment made to the contractor due to the excess length of the pile measured was ₹ 2.46 crore. When the overpayment was brought (June 2010) to notice the SE replied (June 2010) that restricting the pile length up to the level of the bottom of the pile cap would involve excavation of a large volume of earth and consequent extra expenditure, inadequate space for storing excavated earth and seepage of water, etc. and hence the payment specification was adopted from shoe level to natural ground level. The reply is not acceptable as there was a separate provision for earthwork excavation for casting the pile caps which indicated that earthwork excavation was inevitable.

(iv) Unauthorised financial benefit to contractor

The bid documents and agreement concluded with the contractor had not provided for payment of secured advances for the materials brought to site. This was also confirmed to the bidders during the pre bid meeting. However, during execution, the contractor requested (August 2009) for payment of advance on the value of materials brought to site. Their request was accepted (August 2009) by the Principal Secretary to Government, PWD, during a review meeting and the contractor was paid advance amounting to ₹ 3.37 crore by way of part payment against the material supplied in December 2009. An amount of ₹ 76.06 lakh remained unadjusted as of June 2010. The payment of advance in violation of agreement provision resulted in unauthorised financial benefit of ₹ 10.85 lakh to the contractor by way of interest at the rate of 14.5 *per cent* prescribed for mobilisation advance in the agreement.

3.1.8.3 Non-adoption of IS specification in usage of cement

The Bureau of Indian Standards revised the specifications for using cement in plain and reinforced cement concrete (RCC) in IS 456-2000. The revised standards stipulated that higher compressive strength of cement concrete could be achieved with lesser quantity of cement content than that provided in the earlier standards.

Scrutiny of estimates of works revealed that the department had prepared the estimates adopting 430.80 kg/cum for RCC at 1:1½:3 and 323.1 kg/cum for RCC at 1:2:4 nominal mix and adopted the same proportion in execution of building works. Though non-adherence to the revised IS 456-2000 was commented upon in previous Audit Reports, the department had not adopted the revised specification. Consequently, excess usage of cement i.e., 130.80 kg/cum for nominal mix RCC 1:1½:3 and 23.10 kg/cum for RCC 1:2:4 was allowed.

It was specified that reduction of 30 kg/cum of cement concrete could be achieved in case 40 mm aggregate (metal) was used instead of 20 mm aggregate. However, the department had not reduced the cement quantity even though 40 mm metal was used in CC 1:5:10. The excess usage of cement in works due to non-adoption of revised specification had resulted in avoidable expenditure of ₹ 3.54 crore.

When this was pointed out by Audit, the CE stated (September 2010) that the revision of data based on IS 456-2000 was under the consideration of Government and hence the present data was being followed. The reply is not acceptable as the IS had been revised as early as in 2000 and the delay of nearly 10 years in revising the data was not justifiable as the non-revision led to avoidable expenditure.

3.1.8.4 Quality Control

The responsibility of procurement of construction materials rested with the contractors and there was no system of departmental issue of the same. Testing of quality of materials procured by contractors and the quality of work was done in private laboratories and technical institutions. The CE instructed (September 2002) all SEs to form Quality Control cells at the circle level for conducting quality control tests, periodical appraisal of the quality of various works done and having a system of feedback for possible improvements. A quarterly return on quality control inspections was required to be sent to the CE by the Quality Control cells. The Quality Control cells had not been established in four out of the five test-checked circles and in the remaining circle, though formed, it was not functioning since October 2004. The department continued to rely on results of sample tests and other quality control tests done by other agencies.

During the exit conference, the CE stated that the works executed were being checked by the Assistant Executive Engineers and Executive Engineers and hence separate quality control wings were superfluous. The reply is not acceptable as check measurements were done for the quantity of work executed. Moreover, quality control also included testing of materials brought to site by contractors, samples from concrete laid and other items of work to ensure quality of work. The CE agreed to look into the matter.

3.1.8.5 Environmental issues

(i) Non-utilisation of fly-ash bricks in buildings works

Based on a notification issued by the Ministry of Environment and Forests, GOI, New Delhi, and considering the environmental advantages of fly ash, the CE instructed (December 2008) all the circles to use fly-ash bricks in construction works carried out in areas within the radius of 100 km from thermal power stations. However, in 1,144 works costing ₹ 68.67 crore, executed by the two divisions[8] during 2008-09 and 2009-10, fly-ash bricks were not utilised.

The department stated (September 2010) that the SEs and EEs would be instructed to use fly-ash bricks in works.

(ii) Non-utilisation of crushed stone sand in building works

A High-level committee constituted (September 2002) by the State Government to survey rivers and river beds in the State recommended to find an alternative material for sand and to help prevent the depletion of river sand

[8] C&M Division, Thiruvallur and Tuticorin

and to save the rivers from exploitation. The Honourable High Court, Madras also gave a similar direction. The Buildings Research Station functioning under the control of SE, P&D Circle, Chennai, after sustained research, had made recommendations for the use of crushed stone sand as an alternative material for river sand on techno-economic considerations.

Accordingly, the CE issued (May 2008) instructions to all the circles/divisions of the department to use stone dust and quarry rubbish as an alternative to sand to an extent of 30 *per cent*. However, quarry dust and crushed stone sand were not used in any of the works involving 86,009 cu m of sand carried out during 2008-09 and 2009-10 in three test-checked divisions[9] where crushed stone sand was available. Non-utilisation of stone crushed sand in 53 works had resulted in depletion of river sand to that extent.

The department stated (September 2010) that the rate of crushed stone sand was higher when compared to the rate of river sand and hence the rate was not approved by the Schedule of Rates Committee and that it would be included on approval. The reply is not acceptable as the decision to use alternative material was made to save the rivers from exploitation. The rate for the item could have been included in the Schedule of Rates for the year 2009-10 for adoption in estimates for the work taken up during 2009-10.

3.1.9 Other points of interest

3.1.9.1 Non-functioning of the Hazard Safety Cell

GOI recommended (April 2004) constitution of a Hazard Safety Cell (HSC) under the direct supervision and control of the Engineer-in-Chief of the State PWD as an advisory body for proper enforcement of the buildings code in all future constructions, thereby ensuring the safety of buildings and structures from all hazards such as earthquakes/cyclones, etc. Accordingly, HSC headed by the SE, P&D Circle, Chennai with the existing staff of EE, AE, AEE and a Draughting Officer of Building Centre Division was established (May 2005) by Government. However, no additional staff was posted for effective functioning as stipulated in the Government order. As a result, vital functions like scrutiny of plans for 'Government buildings and Private building' were not carried out. The very purpose of establishing the HSC by GOI/State Government was defeated, despite the fact that Tamil Nadu comes under low to moderate seismic prone zone.

The department stated (September 2010) that the formation of HSC with the existing staff was a temporary initiative only. The reply is not acceptable as the Government formed the HSC more than five years ago but no effective functioning of the HSC had taken place to ensure and certify the safety of buildings, particularly multistoried buildings.

[9] C&M Divisions Dharmapuri, Salem and Villupuram.

3.1.9.2 Under-performance of a laboratory

A laboratory was functioning under the control of the Building Centre and Conservation Division for conducting quality control tests and research works relating to problems connected with soil, cement, concrete, other building materials, etc.

A review of the records maintained by the laboratory revealed that only 61 tests were carried out during 2005-10. Concrete cube tests were conducted for the work of construction of a new complex for the Tamil Nadu Legislative Assembly at the foundation stage only. Thereafter, no test was carried out, as no request was forthcoming from the authorities concerned. As no physical as well as financial target had been fixed, the purpose for which the laboratory was established stood defeated.

The department stated (September 2010) that the proposals for improving the laboratory and increasing the number of tests would be submitted soon.

3.1.9.3 Non renewal of lease agreements

Note 4 under Para 275 of the Tamil Nadu Public Works Department (TNPWD) Code specifies that the period of lease in respect of Government buildings given for commercial and other purposes at market rates of rent would be restricted to a period of three years. As per the CE's instructions (November 1989), the rent for the Government buildings should be got fixed once in three years. Scrutiny of records of the CE indicated that 48 lease agreements were not renewed on expiry of lease periods and the proposals for revision of rent were pending at various levels (SEs/EEs - 30 cases; CE - seven cases and the Government - 11 cases).

3.1.10 Maintenance of buildings

More funds were spent on maintenance of guest houses/VIP residences

There were 35,548 non-residential and 6,760 residential buildings under the maintenance control of PWD. The department was to provide funds in its budget for maintenance of non-residential and residential buildings of Judicial, Land Revenue, Police, Public Works, Registration, Transport and other administrative departments and monuments and memorials. For other departments, provision of funds was made in their respective budgets. The details of budget provisions made and expenditure incurred on maintenance of residential and non-residential buildings by the department and the expenditure on Government guest houses and VVIP residences during 2005-10 are given in **Table 9.**

Table 9: Budget provision and expenditure on maintenance of buildings

(₹ in crore)

Year	Non-residential buildings				Residential buildings			
	For all buildings		For guest houses		For all buildings		For VVIP residences	
	P	E	P	E	P	E	P	E
2005-06	10.98	9.68	6.15	5.76	16.71	16.20	9.11	8.69
2006-07	12.58	11.09	6.85	6.41	19.18	18.50	11.20	10.56
2007-08	13.04	11.81	7.21	6.80	15.87	15.36	7.85	7.50
2008-09	12.26	11.89	7.77	7.40	14.86	14.53	6.06	5.90
2009-10	12.11	11.15	7.06	6.48	15.54	14.88	6.19	5.84
Total	**60.97**	**55.62**	**35.04**	**32.85**	**82.16**	**79.47**	**40.41**	**38.49**

P: Provision;   E: Expenditure

(Source: Appropriation Accounts)

Fifty-eight *per cent* of the total allocation for the State for maintenance of non-residential buildings and 49 *per cent* of the total allocation for maintenance of residential buildings were earmarked for maintenance of Government guest houses and VVIP residences respectively indicated that all other Government residential and non-residential buildings were given less importance for maintenance.

3.1.10.1 Shortfall in provision of funds

(i) Test check of records of six out of 12 C&M Divisions revealed that there were shortfalls in provision of funds for maintenance of non-residential and residential buildings as indicated in **Table 10.**

Table 10: Details of funds provided and expenditure incurred on maintenance during 2005-10

(₹ in lakh)

Name of the Division	Funds sought for		Funds provided		Expenditure	
	Office/ Residential Building	Inspection Bungalow/ Guest House/ VIP Residence	Office Building/ Residential Building	Inspection Bungalow/ Guest House/VIP Residence	Office Building/ Residential Building	Inspection Bungalow/ Guest House/ VIP Residence
2059-Public Works						
Virudhunagar	36.50	64.40	18.84	24.97	18.27	23.60
Pudukottai	132.50	227.24	55.46	68.53	42.77	66.47
Trichy	112.52	213.52	52.00	105.43	51.87	98.87
South Presidency Division	127.30	281.67	68.00	190.46	57.94	179.19
Thiruvallur	118.03	122.80	50.06	60.67	44.39	48.48

(₹ in lakh)

Name of the Division	Funds sought for		Funds provided		Expenditure	
	Office/ Residential Building	Inspection Bungalow/ Guest House/ VIP Residence	Office Building/ Residential Building	Inspection Bungalow/ Guest House/VIP Residence	Office Building/ Residential Building	Inspection Bungalow/ Guest House/ VIP Residence
2216-Housing						
Virudhunagar	149.77	-	54.53	-	52.47	-
Pudukottai	376.51	-	53.46	-	56.75	-
Trichy	425.16	-	152.03	-	151.20	-
South Presidency Division	730.70	4,157.57	499.00	3,216.50	493.66	3,153.82
Thiruvallur	335.90	-	122.75	-	119.48	-

(Source: Divisional Records)

In view of inadequate provision of funds for maintenance, the divisions were forced to maintain less number of buildings.

(ii) Audit also observed that importance was given for maintenance of inspection bungalows/guest houses compared to other buildings. **Table 11** indicates the expenditure incurred on maintenance of inspection bungalows/ guest houses and other buildings.

Table 11: Details of expenditure incurred on maintenance of buildings during 2005-10

(₹ in lakh)

Name of the Division	Office Building/Residential Building			Inspection Bungalow/Guest House/VIP Residence			Percentage of expenditure on Inspection Bungalow/ Guest House/VIP Residence
	No. of Buildings	Plinth Area (in sq. m.)	Expen-diture	No. of Buildings	Plinth Area (in sq. m.)	Expen-diture	
Virudhunagar	15	3,037	18.27	6	1,877	23.60	56
Pudukottai	20	2,625	42.77	24	2,146	66.47	61
Trichy	44	7,776	51.87	13	3,651	98.87	66
South Presidency Division	4	9,419	57.94	84	63,724	3,333.01	98
Thiruvallur	33	2,631	44.39	6	2,268	48.48	52

(Source: Divisional Records)

In view of lesser provision of funds for maintenance of other buildings, the possibility of those buildings losing their life span could not be ruled out.

3.1.11 Manpower

Adequate and well-equipped manpower is one of the pre-requisites for proper planning, implementation and monitoring of various schemes and efficient functioning of an organisation.

3.1.11.1 Norms for workload not revised

The Government had fixed (December 1991) norms for workload as ₹ 2.20 crore per division in respect of city areas and ₹ 1.80 crore per division in respect of mofussil areas. Since then, the expenditure for works increased manifold due to increase in cost of construction materials and labour. The norms were, however, had not been revised ever after 18 years**.**

The department stated that proposals would be sent for revision of workload norms.

3.1.11.2 Vacant posts

More number of vacancies in technical cadre

The department had a number of vacancies, both in the technical and non-technical cadres and the posts remained vacant for long periods. The details of technical cadres where there were vacancies are given in **Appendix 3.6.**

3.1.12 Internal control and monitoring

3.1.12.1 Internal control

The internal control mechanism in a Government department is meant to ensure that its activities are carried out according to the prescribed rules and regulations and in an economical, efficient and effective manner. An internal control system and strict adherence to Statutes, Codes and Manuals minimize the risk of errors and irregularities and help to protect resources against loss due to waste, abuse and mismanagement. The deficiencies noticed in the internal control system are as follows:

(i) Para 550 of the PWD Accounts code stipulated that remittances into and drawals from treasuries should be reconciled with divisional figures immediately after the month of transactions. Scrutiny of statements of Schedule of Settlement with Treasuries in the test-checked divisions revealed that departmental remittances for ₹ 52.28 lakh (339 items) were not acknowledged by the treasuries. Similarly, 202 items amounting to ₹ 6.19 lakh accounted for by treasuries were not accounted for in departmental books **(Appendix 3.7).** The remittances which were not acknowledged by treasuries were pending clearance for periods ranging from one to 19 years.

(ii) Para 419 of the Tamil Nadu Public Works Account (TNPWA) Code stipulates maintenance of Miscellaneous Public Works Advance registers to watch advance payments made to suppliers, recoveries/adjustment of sales on credit, excess expenditure incurred on deposit works, losses, retrenchments etc.

Scrutiny of the registers in the test-checked divisions, revealed that advances to suppliers, material cost to be recovered, losses or retrenchment, etc. amounting to ₹ 85.09 lakh in respect of 90 items had remained unadjusted for periods ranging between two to 29 years.

(iii) Para 463 (iii) of the TNPWA Code stipulated that the deposits unclaimed for more than three complete account years should be credited to Government as lapsed deposits.

(a) A total of 599 items of deposits amounting to ₹ 2.04 crore due for lapsing had not been lapsed to Government account for periods ranging from one to 21 years by the test-checked divisions.

(b) A total of 3,405 interest-bearing securities pledged in favour of divisional officers amounting to ₹ 44.44 lakh had not been lapsed to Government account for periods ranging from 1 to 41 years.

(c) A total of 167 demand drafts (DD) for ₹ 3.94 lakh relating to the period after 2005-06 were kept in the test-checked divisions. Even though the DDs were to be encashed as and when received and credited to Government Account, due to failure of the divisions to encash the same in time, the DDs became time-barred and unrealisable.

(d) A total of 1,584 items amounting to ₹ 15.82 lakh received in the forms of Kisan Vikas Patras, National Savings Certificates, etc. which remained unclaimed for more than three accounting years, were found not pledged in favour of the EE concerned as prescribed under Para 456 of TNPWA Code. This would result in loss of revenue to Government as the department would not be able to realize them due to non-pledging in its favour.

(iv) Para 216 of the TNPWA Code stipulates that completion reports (CR) should be prepared for all the works completed and finally paid for. It was seen that CRs in respect of 84 works in test-checked divisions, were not recorded even though the works were completed one to six years back.

(v) Para 143 of the TNPWD Code stipulated that Standard Measurement Books should be maintained to facilitate preparation of estimates for maintaining and carrying out periodical repairs to buildings, showing the detailed measurements of each item of work in the buildings which are usually subjected to renewal periodically. However, Standard Measurement Books were not maintained in any of the test-checked divisions.

The department stated that the Executive Engineers would be addressed to take action to clear the pendency in the above items.

(vi) Para 261 and 262 of the TNPWD Code read with the CE's instructions (April 2001) stipulated that each Executive Engineer should maintain a Register of Public Buildings (RPB) with complete data on the buildings. As the buildings constructed by the PWD formed part of the fixed assets of the

State, details of improvements, alteration and additions carried out in each year should also have been entered in the Register. However, in test-checked divisions 3,038 buildings completed at a cost of ₹ 574.87 crore under various schemes during the period 2005-09 were not entered in such Registers.

3.1.12.2 Internal audit

Internal audit had been completed by the CE in 13 out of 17 circles during the year 2007-08. No internal audit was conducted during 2008-09 and 2009-10. The period up to which audit was completed by the CE in respect of five units is furnished in **Table 12.**

Table 12: Arrears in internal audit

Name of the Circle	Date of audit by CE	Period of accounts covered
Thirunelveli Circle	22.11.2008	12/2004 to 11/2006
Thoothukudi Circle	22.11.2008	11/2004 to 10/2006
Salem Circle (Civil)	13.12.2006	4/2004 to 31.3.2006
Salem Circle (Electrical)	17.12.2009	8/2005 to 7/2007
Public Works Department Staff Training Institute	27.04.2009	3/2004 to 2/2006

(Source: Details furnished by the department)

The department attributed the arrears to manpower shortage.

3.1.12.3 Response to Audit

The Principal Accountant General (Civil Audit) conducts audit of the Public Works Department (Buildings) and its subordinate offices and the irregularities are reported through Inspection Reports (IRs). There were 279 paragraphs included in 90 IRs pending as of July 2010 as shown in **Table 13.**

Table 13: Pending IRs and paragraphs

Year	Number of IRs	Number of paragraphs
2004-05	1	3
2005-06	3	4
2006-07	3	4
2007-08	16	26
2008-09	32	80
2009-10	31	133
2010-11	4	29
Total	**90**	**279**

3.1.13 Conclusion

Budgeting was unrealistic in view of large-scale re-appropriations and persistent savings under 'Direction and Administration'. The Twelfth Finance

Commission grants for maintenance of buildings and heritage conservation were not fully availed of. Cases of violation of the provisions of the Tamil Nadu Transparency in Tenders Act, overpayment to contractor, wasteful expenditure, avoidable expenditure and extension of undue benefit to contractor were noticed during audit.

3.1.14 Recommendations

- Large-scale reappropriations and surrender of funds at the end of financial years should be avoided.
- Adequate funds should be provided for maintenance of office and residential buildings.
- Technical specifications prescribed by the Bureau of Indian Standards need to be followed scrupulously in order to effect economy and to ensure quality in execution of works.
- Quality Control cells should be established in all circles.

The above points were referred to Government in September 2010. Reply had not been received (November 2010).

Chennai
The

(REVATHI BEDI)
Principal Accountant General (Civil Audit)
Tamil Nadu and Puducherry

Countersigned

New Delhi
The

(VINOD RAI)
Comptroller and Auditor General of India