CHAPTER–IV
Development and Construction of Properties

CHAPTER-IV

Development and Construction of Properties

YEIDA executes development and construction activities in its industrial development area through contractors from its own funds. As per Master Plan 2031, YEIDA was required to develop 19,575 hectare land by 2021, but it could not complete the required infrastructure facilities due to not ensuring availability of encumbrance free land to contractors, farmers' agitation, *etc*.

There were deficiencies in system and procedures, such as failure to utilise budget allocation for development and construction activities in absence of preparation of Annual Plans, award of contracts at higher rates, undue favour to architects, short recovery of performance guarantee from contractors, *etc.*

YEIDA failed to comply with Indian Road Congress guidelines for construction of roads resulting in deficiencies *viz.,* unwarranted execution of surface dressing and seal coat, use of unprescribed materials in construction of interlocking concrete block pavement, inadmissible use of semi-dense bituminous concrete over granular base, *etc.* and consequent avoidable expenditure.

YEIDA short deducted statutory dues from the bills of contractors and failed to protect public interest due to not obtaining environmental clearance.

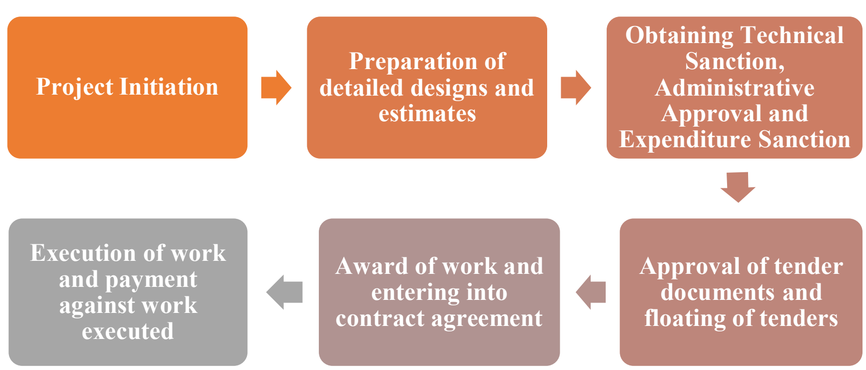
Introduction

4.1 YEIDA after acquisition of land, executes development activities on the land so acquired which includes construction of roads, drains, water supply system, sewerage system, electrification works and horticulture works. It also executes village development activities such as construction of village roads, drains*, etc.,* in villages under its industrial development area. Besides, it executes works relating to maintenance of services and amenities in its industrial development area. YEIDA also develops plots/properties of various categories *viz.,* residential, commercial, group housing, institutional, industrial, *etc*. for allotment and constructs houses for people of various income groups. All the aforesaid activities are carried out by YEIDA through contractors from its own funds.

Activity process

4.1.1 The process followed by YEIDA for execution of development and construction activities is depicted in **Chart 4.1** below:

Chart 4.1: Process for execution of development and construction activities



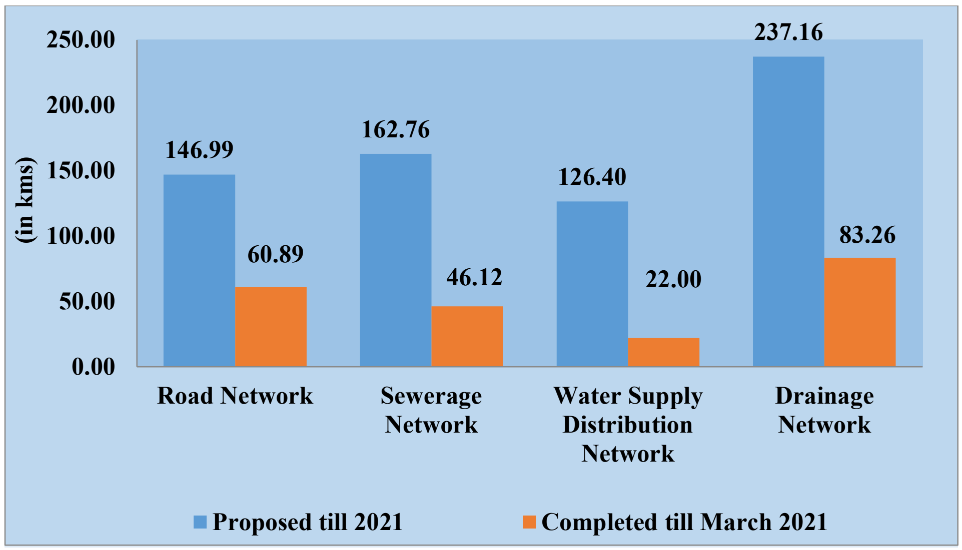
Source: Work procedure of Project Division of GNIDA as adopted by YEIDA

Status of development activities

4.1.2 Master Plan (Phase-I) 2031 proposes development of the area in two stages *viz.*, first stage up to 2021 and next stage up to 2031. As per the Master Plan the total area proposed to be developed/urbanised till 2031 is 24,739.01 hectare out of which 19,575.12 hectare (79 *per cent*) was proposed to be developed/urbanised by 2021.

A comparison of various infrastructure facilities/services *viz.,* water supply, sewerage, drainage and roads to be executed by YEIDA as per respective activity Master Plans up to 2021 and actually completed till March 2021 are depicted in **Chart 4.2** below:

Chart 4.2: Details of infrastructure facilities/services completed till March 2021



Source: Information furnished by YEIDA

From above, it would be seen that YEIDA could complete only 17 to 41 *per cent* of the required infrastructure facilities/services up to March 2021. The delay in development of infrastructure facilities led to delayed handing over of allotted plots to the allottees and subsequently grant of time extension for making the projects functional.

In its reply, YEIDA stated (November 2022) that the main reason for not developing the area was due to litigation/public unrest for demand of additional compensation by the farmers.

The reply is not acceptable because YEIDA had invariably invoked urgency clause in almost all cases of acquisition on unjustifiable grounds (as discussed in **Paragraph 3.5.1)** which led to litigation/stay orders by Courts and farmers' agitation. Had YEIDA done due diligence before invoking urgency clause, hindrances due to litigation and farmers' agitation and consequent delays in execution of development activities could have been avoided.

Audit coverage

4.2 YEIDA entered into 933 contracts of ₹ 2,783.18 crore during the period from 2009-10[1] to 2020-21 for execution of development and construction works. Audit selected 148 contracts valuing ₹ 1,007.22 crore for detailed examination on the basis of stratified random sampling.

[1] No contract for development and construction works was entered into prior to 2009-10.

Out of the sampled 148 contracts, Audit examined 99 contracts[2] valuing ₹ 693.65 crore which was 25 *per cent* of the total contract value. The records related to 49 contracts were not furnished by YEIDA during the course of audit from October 2021 to April 2022.

YEIDA stated (November 2022) that the remaining records will be furnished to Audit. These records will be examined in next audit of YEIDA.

Audit findings

4.3 The audit findings relating to execution of development and construction activities by YEIDA which are discussed in succeeding paragraphs have been grouped as under:

- Deficiencies in system and procedures ***(Paragraphs 4.4 to 4.4.8);***
- Violation of Indian Roads Congress guidelines ***(Paragraphs 4.5 to 4.5.5);*** and
- Statutory provisions not complied with ***(Paragraphs 4.6 to 4.6.5).***

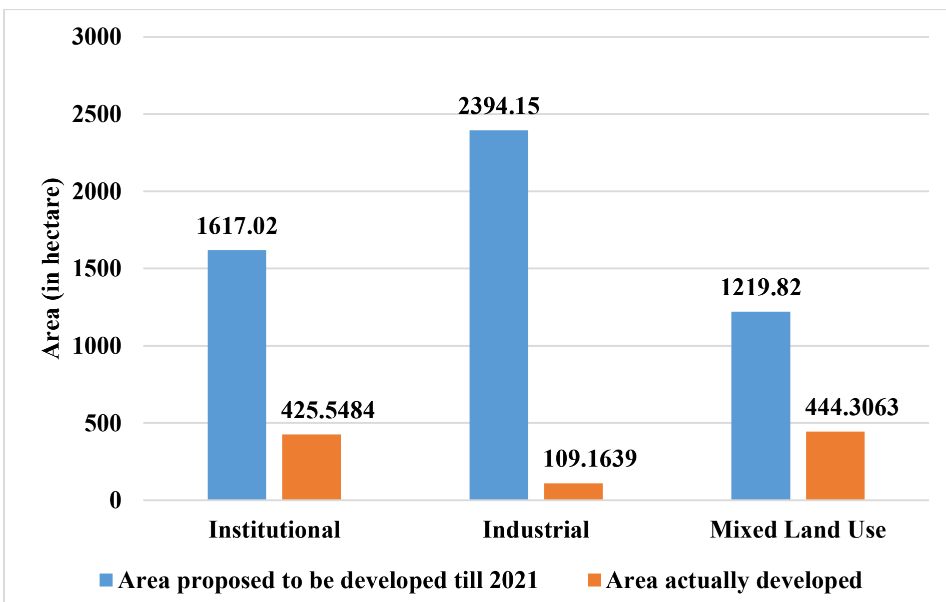
Deficiencies in system and procedures

4.4 Audit noticed several deficiencies in the system and procedures adopted by YEIDA in execution of development and construction activities which are discussed in detail in the succeeding paragraphs.

Target for development of various land use zones not achieved

4.4.1 The estimated area developed[3] by YEIDA *vis-à-vis* the area proposed to be developed by it for institutional, industrial and mixed land use zones till 2021 as per Master Plan (Phase I) 2031 is depicted in **Chart 4.3** below:

Chart 4.3: Area developed by YEIDA *vis-à-vis* area proposed to be developed by 2021



Source: Information furnished by YEIDA

---

[2] 59 civil works (39 completed and 20 work-in-progress), 15 Electrical and Mechanical works (nine completed and six work-in-progress) and 25 Horticulture works (19 completed and six work-in-progress).

[3] In absence of details of area developed by YEIDA for various land uses, Audit has considered the area of plots for which checklists have been issued as net area developed and then divided the net area developed by the saleable area percentage to arrive at the estimated area developed by YEIDA.

YEIDA could develop only five to 36 *per cent* of area planned to be developed for institutional, industrial and mixed land use zones till 2021.

From the above chart, it is evident that YEIDA could develop only five to 36 *per cent* of area planned to be developed for institutional, industrial and mixed land uses till 2021. Audit noticed that the main reasons for failure of YEIDA in achieving the target for development of various land use zones as per Master Plan (Phase-I) 2031 were litigation/ public unrest in respect of acquired land, delays in completion of development activities and not acquiring of entire land proposed for development under first stage of Master Plan (Phase-I) 2031.

In its reply, YEIDA stated (November 2022) that the main reasons for not developing the planned area were farmers' agitation for additional compensation and litigation and stay orders of the Courts in respect of acquired land. It further stated that after the Hon'ble Supreme Court's judgment dated 19 May 2022 allowing payment of additional compensation to farmers, the hindrance by farmers has been cleared and development works are being completed.

The reply is not acceptable because YEIDA had invariably invoked urgency clause in almost all cases of acquisition on unjustifiable ground (as discussed in **Paragraph 3.5.1)** which led to litigation/stay orders by Courts and farmers' agitation. Had YEIDA done due diligence before invoking urgency clause, hindrances due to litigation and farmers' agitation and consequent delays in development of land could have been avoided.

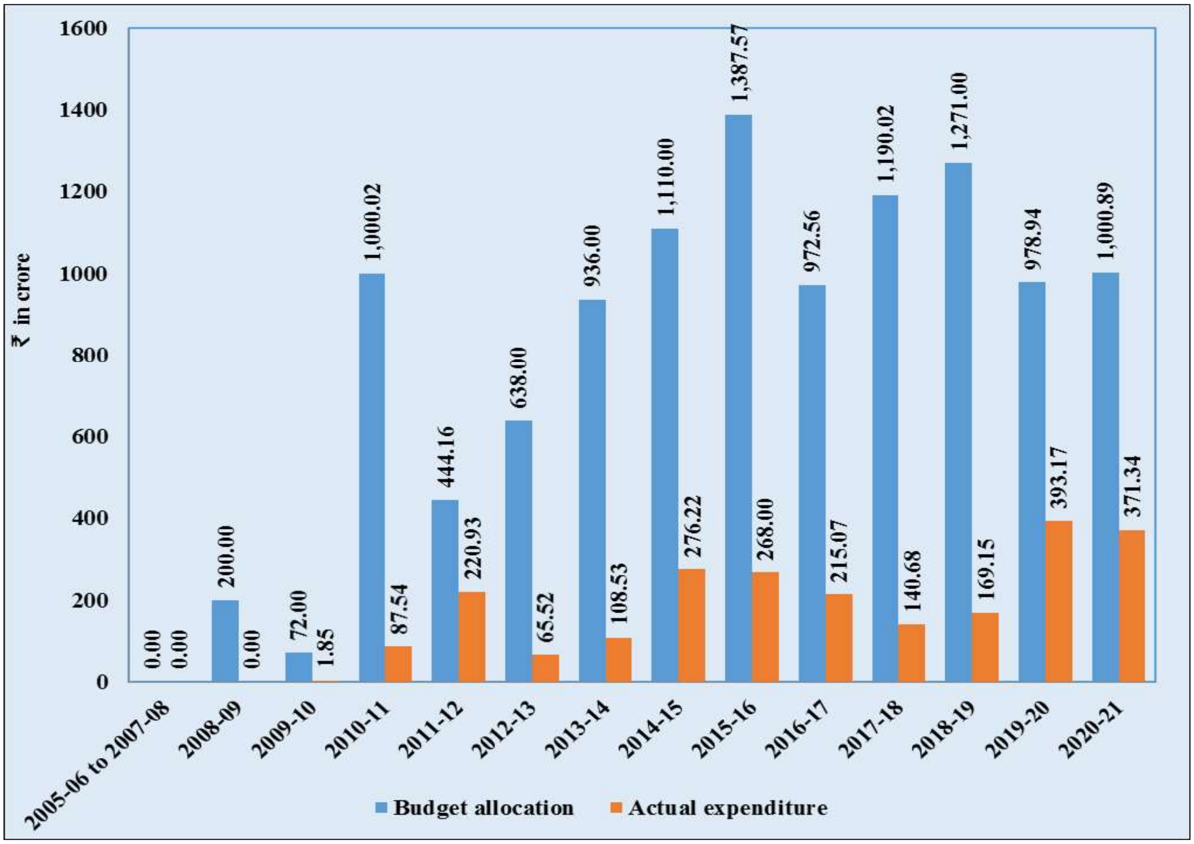
Annual Plan not prepared

4.4.2 The Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines issued (January 2015) by the Ministry of Urban Development, Government of India provide that the local authority shall prepare an Annual Plan in each financial year. The Annual Plan would contain details of new and ongoing projects that the local authority intends to implement during the financial year for necessary financial resource mobilisation and monitoring its performance. Annual Plan, therefore, serves as an important link with the budgetary process and also provides a mechanism to monitor progress of the Development/Master Plan and various projects.

Audit noticed that YEIDA did not prepare Annual Plans containing details of new and ongoing projects that it intended to implement in the financial year after taking into account the physical and financial performance of the preceding year and the priorities, policies and proposals contained in the approved Master Plan. This resulted in allocation of funds for execution of development and construction works in the annual budget and award of works without any scientific basis.

The year-wise allocation of funds for development and construction works and its utilisation during the period 2005-06 to 2020-21 is depicted in **Chart 4.4** below:

Chart 4.4: Year-wise allocation and utilisation of funds for development and construction works



Source: Annual budget of YEIDA for the period 2005-06 to 2021-22

It may be seen from the above chart that during the period 2008-09 to 2020-21, YEIDA could not fully utilise the allocated funds in any of the years and the utilisation of allocated funds ranged between zero and 50 *per cent* only.

YEIDA did not prepare Annual Plans resulting in short utilisation of allocated funds as well as blockade of funds expended on incomplete projects amounting to ₹ 132.88 crore.

Further, out of 99 contracts test checked in audit, works under 17 contracts, awarded during the period March 2010 to January 2021, were lying incomplete even after lapse of three months to 10 years (up to April 2022) after the scheduled date of completion. An expenditure of ₹ 132.88 crore was incurred by YEIDA on such incomplete works till date (April 2022). Since, the nature of the works (roads, sewerage, water supply, drainage, *etc.)* executed under the aforesaid contracts was such that the works were fully utilisable only upon completion of the entire work, YEIDA's funds to the tune of ₹ 132.88 crore remained blocked **(Appendix-4.1)** and the intended purpose of the works also remained unfulfilled.

Audit observed that the main reason for short utilisation of allocated funds and works remaining incomplete was allocation of funds and award of works without ensuring availability of encumbrance free land to contractors due to litigation and farmers' agitation. An Annual Plan prepared after taking into account the physical and financial performance of the preceding year would have ensured allocation of funds and award of works in a scientific manner after considering the availability of encumbrance free land, thereby, ensuring substantial utilisation of allocated funds and avoiding blockade of funds due to works lying incomplete.

In its reply, YEIDA stated (November 2022) that annual planning, detailing the development works *viz.*, sewerage, drainage, roads, electrification, *etc.*, was done by it. Tenders were invited on the basis of approved budget only and the works were monitored every month by the Project Department by preparing progress reports. It could not fully utilise the allocated funds as the works were hindered due to litigation in various courts by landowners and farmers' agitation demanding additional compensation. It further stated that efforts were being made by it to complete the works.

The reply is not acceptable as in the absence of Annual Plans, YEIDA allocated funds and awarded works without assessment of availability of encumbrance free land and performance/progress of the projects in the preceding year which consequently led to short utilisation of allocated funds on one hand and blockade of funds expended on incomplete projects on the other hand.

Recommendation No. 10

YEIDA should prepare an Annual Plan for effective monitoring and utilisation of funds in execution of developmental projects as per Master Plan.

Estimates not prepared on the basis of detailed designs

4.4.3 Clause 4.2.2(2) of the CPWD Works Manual 2007[4] provides that the estimate for a project/work should be comprehensive, supported by complete details and based on drawings and design calculations, where necessary. The Project Department of YEIDA prepares estimates based on CPWD Works Manual.

Audit noticed that in five contracts[5] awarded (August 2013 to October 2014) for construction of multi-storied residential apartments examined by Audit, the estimated quantity for steel reinforcement was calculated as a percentage of estimated quantity of reinforced cement concrete work instead of on the basis of detailed designs. As a result, the actual quantity of steel reinforcement in execution of works increased[6] by 51 *per cent* to 55 *per cent* in four works and six *per cent* in one work resulting in increase in expenditure by ₹ 7.61 crore from the estimated cost during execution of the work as detailed in **Appendix-4.2.**

Thus, YEIDA failed to incorporate the precise quantities in the estimates due to not preparing estimates on the basis of detailed designs. As a result, there was no price discovery in respect of such excess quantities through competitive bidding. Besides, it has also resulted in short deposit of performance security by the contractors as performance security is obtained on the contracted amount whereas actual quantity was more than the estimated quantity on which payment was made.

In its reply, YEIDA stated (November 2022) that the quantity of steel reinforcement was provided as per prescribed standards. The site of the work was, however, changed from Sector-18 to Sector-22D and structural designs were prepared considering factors such as load bearing capacity of land, quality

[4] YEIDA decided (28 April 2010) to adhere to the provisions of CPWD Works Manual 2007 for execution of works except for provisions regarding administrative and financial powers.

[5] Out of eight contracts examined by Audit.

[6] After considering additional flats constructed under the contracts.

and seismic zone-4 resulting in variation in executed quantities. Besides, additional flats were constructed under contracts.

The reply is not acceptable as in other three contracts for construction of multi-storied residential apartments examined by Audit, YEIDA had calculated the estimated quantity for steel reinforcement on the basis of detailed designs whereas, in the above five contracts, it had calculated the estimated quantity of steel reinforcement as a percentage of reinforced cement concrete work instead of on the basis of detailed designs. Further, no evidence was furnished for increase in consumption of steel due to shift in sites. Besides, Audit has calculated the variation in quantity and resultant increase in expenditure after considering the additional flats constructed under the contracts.

Award of works at higher rates due to inflated justified cost

4.4.4 Clause 19.4.3 of the CPWD Works Manual 2007 provides that the tender accepting authority shall satisfy itself about the reasonability of rates before acceptance of the tenders. Clause 19.4.3.1 of the Manual further provides that justification statement for checking the reasonability of rates shall be prepared before opening of tender based on the market rates prevailing on the last date of submission of tender. The method for preparing justification of rates consists of preparing detailed analysis of rates by taking market rates of labour, materials, cartage, *etc*.

Justified cost was calculated considering 21 *per cent* higher rates of 11 KV XLPE cables resulting in extra expenditure of ₹ 1.56 crore.

Audit noticed that YEIDA awarded (November 2013 to February 2014) four contracts for construction of underground electrical lines which included supply and laying of 11 KV XLPE[7] cables. The rates for supply and laying of 11 KV XLPE cables[8] in justification statements prepared by YEIDA were 21 *per cent* higher than the rates for the same item prescribed by Uttar Pradesh Power Corporation Limited (UPPCL), a GoUP Public Sector Undertaking, for the year 2013-14. As a result, the justified cost for award of tender worked out by YEIDA was 18 *per cent* to 19 *per cent* higher than the justified cost worked out on the basis of rates of UPPCL. As the bids for contracts were benchmarked against higher justified cost, the contracts were awarded at higher rates and consequently, YEIDA incurred extra expenditure of ₹ 1.56 crore as detailed in **Appendix-4.3**.

In its reply, YEIDA stated (November 2022) that the estimates were prepared on the basis of GNIDA's Schedule of Rates (SOR). It further stated that YEIDA has approved makes of Class – A category companies of international standards whereas in UPPCL, along with international companies, makes of local and regional companies are also prevalent which supply products to UPPCL at lower rates. Besides, the rate per unit incurred by YEIDA is 4.53 *per cent* less than UPPCL's rates.

The reply is not acceptable as the rates prescribed by UPPCL are based on average purchase rates and thus reflect the prevalent market rates. Further, YEIDA's emphasis on specific makes is also not acceptable as the rates prescribed by UPPCL were based on rates of materials actually purchased, which corroborates that the said products met the prescribed specifications.

[7] Cross-linked polyethylene (XLPE) is a form of polyethylene (a type of plastic) with cross-links. It is formed into tubing and is used pre-dominantly in insulation for high tension (high voltage) electrical cables, *etc*.

[8] The item of supply and laying 11 KV XLPE cable alone constituted 91 *per cent* to 93 *per cent* of the estimated cost of the works.

Besides, the per unit rate of UPPCL calculated by YEIDA is also incorrect as it includes charges[9] recovered by DISCOMs[10] when works are executed by them whereas in these cases YEIDA has awarded the work of supply and laying of XLPE cable to the contractors.

Tendered rates not compared with rates of similar works accepted in the past

4.4.5 The Work Procedure of Project Division of GNIDA[11] (adopted by YEIDA in September 2007) provides that while finalising the tender, the tender committee will not only examine the tenders with respect to justified rates, but shall also compare the tendered rates with the rates accepted for similar works in the past for checking the reasonability of rates.

Audit noticed that while finalising tenders, YEIDA compared the tendered rates with the justified rates only and did not compare the tendered rates with the rates accepted for similar works in the past. As a result, in five cases, construction works were awarded (May 2010 to January 2021) at higher rates by up to five *per cent* when compared to the rates of works of similar nature that were awarded on the same day or just a day before resulting in excess expenditure of ₹ 1.99 crore as detailed in **Appendix-4.4**.

In its reply, YEIDA stated (November 2022) that in Central Vigilance Commission (CVC) guidelines, there is no provision for negotiation with lowest tenderer considering the previous tendered rates and the awarded rates were below the justification rates.

The reply is not acceptable as the Work Procedure clearly states that the tendered rates shall be compared with the rates accepted for similar works in the past. Further, YEIDA itself had negotiated with the lowest tenderer in several cases. Besides, CVC guidelines[12] also state that there should be no post tender negotiations with the lowest bidder except in certain exceptional situations wherein justification and details of such negotiation is duly recorded and documented without any loss of time.

Award of architectural works at higher rate

4.4.6 Uttar Pradesh Rajkiya Nirman Nigam Ltd. (UPRNN), a GoUP Company engaged in construction works appoints architectural firms for providing comprehensive architectural consultancy at a fee of 1.5 *per cent* (inclusive of service tax) of the total cost of project. Further, in case of repetitive works the fee payable is adjusted for repeats as per the prescribed formula[13].

YEIDA paid higher fee for architectural services resulting in excess expenditure of ₹ 1.61 crore.

Audit noticed that YEIDA had awarded (March 2013 and July 2013) the work of preparation of layout and detailed architectural design including structural design for Group Housing Schemes in Sector-18 and Sector-22D to architectural firms Arch-en-Design and Vastu Mandal respectively at rates awarded by GNIDA without any price discovery on competitive basis. As per the terms and conditions of the agreements entered into with the architects, fees (inclusive of Service Tax) for first block was payable at the rate of

9 Tools and Plants charges at the rate of 1.5 *per cent* and Establishment and Administration charges at the rate of 31.50 *per cent*.
10 Electricity Distribution Companies.
11 Adopted by YEIDA in its 16th Board Meeting held on 10 September 2007.
12 Circular No. 4/3/07 dated 3 March 2007.
13 Fa = Ft - (Ft x Vr/Vt/2) where: Fa = Fee after adjustment for repeats, Ft = Fee determined in terms of total project, Vr= Value of repeated units in term excluding the first unit and Vt = Value of the total project.

three *per cent* of the total cost of the block and at the rate of 0.99 *per cent* of the total cost of remaining repetitive blocks. Thus, YEIDA paid higher rates for similar nature of work *vis-a-vis* rates paid by UPRNN which resulted in excess expenditure of ₹ 1.61 crore as detailed in the **Table 4.1** below:

Table 4.1: Details of excess expenditure incurred in award of architectural works

(₹ in lakh)

Sl. No.	Name of the architectural firms	No. of blocks	No. of flats	Cost of single block	Fee for first block at the rate of 3 *per cent*	Fee for repetitive blocks at the rate of 0.99 *per cent*	Total fee paid	Fee payable as per UPRNN rates	Excess expenditure
1.	Arch-En Design	340	5,100	74.62	2.24	250.42	252.66	190.83	61.83
2.	Vastu Mandal	8	1,280	1,413.28	42.40	97.94	140.34	95.40	44.94
		8	768	1,712.10	51.36	118.65	170.01	115.57	54.44
Total		**356**	**7,148**	**3,200.00**	**96.00**	**467.01**	**563.01**	**401.80**	**161.21**

Source: Concerned files of YEIDA

In its reply, YEIDA stated (November 2022) that the architects were engaged on the same terms and conditions and at the same rates at which GNIDA engages architects, after the concurrence of Finance/ Legal departments of YEIDA.

The reply is not acceptable because YEIDA did not explore the rates being paid by other GoUP undertakings, *e.g.*, UPRNN primarily engaged in construction works, which resulted in excess payment for architectural services.

Undue favour to architect in award of work

4.4.7 The Manual of Policies and Procedure of Employment of Consultants and Manual for Procurement of Consultancy and Other Services issued by the Ministry of Finance, GoI in August 2006 and April 2017 respectively prescribe Quality and Cost Based Selection[14] (QCBS) as the desired mode for selection of consultants in case of highly technical, complex and critical assignments. Under the QCBS mode, minimum qualifying marks are prescribed as benchmark for quality of the technical proposal. The consultants who qualify as per the technical evaluation criteria are considered as technically responsive and financial proposals of such consultants are opened. The financial proposals are also given cost score based on relative ranking of prices, with 100 marks for the lowest and pro-rated lower marks for higher priced offers. The total score is then obtained by weighting the quality and cost scores and adding them. The firm obtaining the highest total score is then selected for the assignment.

Audit noticed that YEIDA invited (July 2015) its empaneled architects to submit concept design for construction of a commercial complex at Sector-18. Seventeen firms submitted (August 2015) preliminary presentations to YEIDA. Subsequently, five firms were shortlisted (June 2017) for next level of presentations. Technical proposals of the aforesaid five firms were evaluated (June 2017) and given marks out of 70 against technical criteria prescribed by YEIDA. It was further decided (June 2017) by the Committee[15] constituted for evaluation of technical and financial proposals that financial proposals of only three firms who had obtained more than 40 marks shall be opened and 30 marks

[14] Referred to as 'Combined Quality Cum Cost Based System' in the Manual of Policies and Procedure of Employment of Consultants issued in August 2006.

[15] Comprising of Additional Chief Executive Officer - Chairman, General Manager (Finance), General Manager (Planning), Dy. General Manager (Project) and Sr. Executive (Architect).

shall be given to the lowest bidder and 10 marks to the highest bidder. Thus, YEIDA had not determined the criteria/ methodology for selection of architects beforehand and had not disclosed the same to the bidders before inviting technical and financial proposals from them. Further, the methodology for allotting financial scores to the bids was determined by YEIDA only after evaluation of technical proposals.

Out of the three firms only two firms had submitted their financial proposals. The lowest bidder was allotted 30 marks and the next higher bidder was allotted 20 marks. Thereafter, YEIDA awarded[16] (June 2017) the work to Spatium Architects as it had the highest overall score of 85. The details of technical and financial scores allotted to various firms are detailed in **Table 4.2** below:

Table 4.2: Details of technical and financial scores allotted to various firms by YEIDA

Sl. No.	Name of the architectural firms	Technical score	Financial score		Total marks allotted out of maximum 100 marks
		Marks allotted out of maximum 70 marks	Rates quoted per acre (₹ in lakh)	Marks allotted out of maximum 30 marks	
1.	Bhargava and Associates Pvt. Ltd.	41	Not received	--	41
2.	Deodhar Associates	43	0.95	30	73
3.	Spatium Architects	65	16.00	20	85

Source: Concerned files of YEIDA

From above, it is evident that YEIDA had selected the architect for the aforesaid assignment on the basis of both quality and cost, *i.e.*, through QCBS mode. YEIDA, however, did not allot financial scores to the bids on pro-rata basis, *i.e.*, according to the quoted price *vis-à-vis* the lowest bid as provided in the aforesaid Manuals. Had YEIDA followed the prescribed methodology for ranking of financial proposals, Deodhar Associates would have been entitled for selection with an overall score of 73 instead of Spatium Architects which would have an overall score of 66.78 only as detailed in **Table 4.3** below:

Table 4.3: Details of technical and financial scores to be allotted to various firms

Sl. No.	Name of the architectural firms	Technical score	Financial score		Total marks to be allotted out of maximum 100 marks
		Marks allotted out of maximum 70 marks	Rates quoted per acre (₹ in lakh)	Marks to be allotted out of maximum 30 marks	
1.	Bhargava and Associates Pvt. Ltd.	41	Not received	--	--
2.	Deodhar Associates	43	0.95	30	73[17]
3.	Spatium Architects	65	16.00	1.78[18]	66.78[19]

Source: Concerned files of YEIDA

YEIDA awarded work to an architectural firm at higher rates due to not adhering to the prescribed methodology under QCBS method resulting in excess expenditure of ₹ 1.96 crore.

Thus, YEIDA awarded the work at higher rates to the firm resulting in excess expenditure of ₹ 2.76 crore against which excess expenditure of ₹ 1.96 crore had already been incurred up to September 2022.

In its reply, YEIDA stated (November 2022) that Spatium Architects was selected as it got overall maximum score of 85 marks in technical and financial

16 At negotiated rate of ₹ 12 lakh per acre against quoted rate of ₹ 16 lakh per acre.

17 43 + 30 = 73.

18 (30 marks x ₹ 95,000 being rate quoted by the lowest bidder)/₹ 16,00,000 being rate quoted by the bidder.

19 65 + 1.78 = 66.78.

bid. It further stated that prescribed procedure had been followed and selection of the firm was done in a fair manner.

The reply is not acceptable as YEIDA, due to not exercising due diligence by its Planning Department, failed to adhere to the prescribed methodology under QCBS method for allotting financial scores resulting in award of work at higher rates.

Short recovery of performance guarantee/security deposit

4.4.8 Clause 20.1 of the CPWD Works Manual 2007[20] provided that the contractor shall deposit five *per cent* of the tendered and accepted value of work as performance guarantee. Further, clause 20.2 of the CPWD Works Manual 2007 provided that a sum of five *per cent* of the gross amount of the bill shall be deducted from each running bill of the contractor till the sum along with the sum already deposited as earnest money amounts to security deposit equivalent to five *per cent* of the tendered amount of the work. The Model Bidding Document issued (January 2007) by Uttar Pradesh Public Works Department[21] also provided for deposit of five *per cent* of the contract amount as Performance Security and five *per cent* of the contract amount as Security Deposit by the contractor.

YEIDA obtained performance guarantee/security deposit at the rate of five *per cent* of the contract amount against the required 10 *per cent.*

Audit noticed that during 2009-10[22] to 2020-21, YEIDA in its tender documents provided for obtaining performance guarantee/security deposit at the rate of five *per cent* of the contract amount only against the required 10 *per cent* amount as performance guarantee/ security deposit. Accordingly, YEIDA obtained performance guarantee/ security deposit at the rate of five *per cent*[23] of the contract amount resulting in short deposit of performance guarantee/security deposit by ₹ 38.63 crore **(Appendix-4.5)** in 97 contracts[24].

Thus, YEIDA had compromised on safeguarding the execution of work and its financial interests due to under charging of performance guarantee/security deposit.

In its reply, YEIDA stated (November 2022) that as per the provisions of CPWD Works Manual security deposit at the rate of five *per cent* is being deducted from the bills of contractors. It further stated that performance guarantee in case of tenders below the estimated cost is being obtained as per the provisions of Government Order (25 September 2013).

The reply is not acceptable as in case of contracts awarded during 2009-10 to 2020-21, YEIDA should have obtained five *per cent* performance guarantee in addition to five *per cent* security deposit as per CPWD Manual provisions and additional performance guarantee in case of tenders below the estimated cost as per the cited Government Order. The absence of clause to obtain performance security in the tenders shows lack of due diligence in framing the tender conditions by the concerned officials of YEIDA.

---

[20] Adopted (28 April 2010) by YEIDA for execution of works.

[21] Model Bidding document in the Form T2 for Construction Works costing above ₹ 40 lakh dated 5 January 2007.

[22] Since when construction works started in YEIDA.

[23] Subject to maximum of ₹ 20 lakh in seven contracts executed during October 2009 to September 2010.

[24] A total of 99 contracts were examined by Audit. However, two contracts were excluded due to being supply contracts.

Recommendation No. 11

(i) YEIDA should strictly follow the extant rules/regulations/guidelines in preparation of estimates and framing of tender conditions.

(ii) Responsibility should be fixed where prescribed procedures in preparation of estimates and award of works have not been adhered.

Violation of Indian Roads Congress guidelines

4.5 Audit noticed that Indian Roads Congress (IRC) guidelines were not adhered in several instances of road works which are discussed in detail in the succeeding paragraphs.

Unwarranted execution of surface dressing

4.5.1 As per Indian Roads Congress (IRC) guidelines (37-2001), pavement layers were to consist of Granular Sub Base, Granular Base and Bituminous Surfacing. Further, bituminous surfacing was to consist of either a wearing course[25] or a binder course[26] with a wearing course[27] depending upon traffic to be carried. Further, Circular dated 13 June 2007 of UPPWD provided that in case of Other District Roads/Major District Roads/State Highways having width of two or more lanes, there shall be no requirement for execution of work of first layer surface dressing before execution of work of Premix Carpet/ Semi-Dense Bituminous Concrete or bituminous crust over non-bituminous crust.

YEIDA executed unwarranted layer of surface dressing in 10 road works resulting in avoidable expenditure of ₹ 3.16 crore.

Audit noticed that estimates for execution of 10 road works having two or more lanes provided for execution of close graded premix surfacing/semi-dense bituminous concrete as a wearing course. In addition to above, provision for execution of surface dressing as wearing course was also made in the estimates. Since, a wearing course as per pavement design was already provided in the estimates, provision for another wearing course in the form of surface dressing was unwarranted in view of the provisions of IRC-37:2001 and UPPWD Circular. Thus, execution of unwarranted layer of surface dressing in above 10 road works awarded during the period October 2009 to March 2019 led to avoidable expenditure of ₹ 3.16 crore as detailed in **Appendix-4.6.**

In its reply, YEIDA stated (November 2022) that Clause 5 of UPPWD order dated 13 June 2007 is for PMGSY[28] roads. Further, these standards are for roads having less than two lanes but the roads mentioned in the observation are 18 metre and 24 metre wide which are wider than PMGSY single lane roads of 3.62 metre. Further, it was assured that provision would be made as per IRC in future projects.

The reply is not acceptable as the order of UPPWD clearly states that in case of Other District Roads/Major District Roads/State Highways having width of two or more lanes, there is no requirement for execution of work of first layer surface dressing before execution of work of Premix Carpet/Semi-Dense Bituminous Concrete or bituminous crust over non-bituminous crust. Moreover, execution of surface dressing work in the above cases was also in contravention to IRC guidelines.

---

25 Wearing course is the top most layer of a road that carries traffic.

26 The most commonly used binder courses are Bituminous Macadam and Dense Graded Bituminous Macadam.

27 The most commonly used wearing courses are Surface Dressing, Open Graded Premix Carpet, Close Graded Premix Surfacing/Mix Seal Surfacing, Semi-Dense Bituminous Concrete and Bituminous Concrete.

28 Pradhan Mantri Gramin Sadak Yojna.

Extra expenditure on construction of Interlocking Concrete Block Pavements

4.5.2 IRC guidelines (IRC:SP:63-2004) provided that Interlocking Concrete Block Pavement (ICBP) to be used for cycle track and pedestrian footpaths shall consist of 200 mm base (WBM[29]/WMM[30]/crushed rock/soil-cement), 20-30 mm sand bedding and 60 mm concrete blocks.

Audit noticed that YEIDA used dry brick edge flooring, WMM, plain cement concrete and 80/60 mm concrete blocks for construction of ICBP in six contracts awarded during the period January 2013 to December 2019 in contravention of IRC guidelines and incurred extra expenditure of ₹ 1.32 crore as detailed in **Appendix-4.7.**

In its reply,YEIDA stated (November 2022) that work of Bricks on Edge (115 mm), Granular Sub Base (75 mm), sand bedding (50 mm) and concrete blocks (60/80 mm) has been executed. Thus, an aggregate work of 300 to 320 mm ICBP has been executed which was in accordance with the prescribed standards.

The reply is not acceptable as YEIDA used materials (dry bricks/plain cement concrete) in ICBPs which were not in accordance with IRC guidelines resulting in avoidable extra expenditure.

Provision of close graded premix surfacing of excess thickness

4.5.3 IRC guidelines (IRC:SP:78-2008) and Specifications for Road and Bridge Works issued by Ministry of Road Transport and Highways (MORTH) provide that the work of close graded premix surfacing shall consist of preparation, laying and compaction of close graded premix surfacing material of 20 mm thickness composed of graded aggregates premixed with bituminous binder on a previously prepared base/surface to serve as a wearing course.

Audit noticed that, in seven contracts for road works awarded during the period October 2009 to May 2018, YEIDA provided for close graded premix surfacing of 25 mm thickness instead of 20 mm in contravention to the aforesaid provisions of IRC guidelines. This resulted in avoidable extra expenditure of ₹ 1.64 crore on laying of extra five mm layer of close graded premix surfacing as detailed in **Appendix-4.8.**

In its reply, YEIDA stated (November 2022) that the work of 25 mm close graded premix surfacing was done in place of 25 mm premix carpet because the finishing of close graded premix surfacing is smooth with less voids.

The reply is not acceptable as YEIDA in these road works executed excess thickness of close graded premix surfacing by five mm which was not in accordance with IRC guidelines resulting in avoidable extra expenditure.

Inadmissible use of semi-dense bituminous concrete over granular base

4.5.4 According to IRC guidelines (IRC:37-2001 and IRC:111-2009) the work of Semi-Dense Bituminous Concrete (SDBC) as wearing course is to be done over a binder course (Bituminous Macadam or Dense Graded Bituminous Macadam) and not directly over a granular base (Water Bound Macadam or Wet Mix Macadam). As per IRC:37-2001, if wearing course is to be laid directly

[29] Water Bound Macadam.
[30] Wet Mix Macadam.

over granular bases, then other wearing courses such as premix carpet or close graded premix surfacing should be used as wearing course.

In six road works YEIDA laid SDBC directly over WMM in contravention to IRC guidelines and incurred avoidable expenditure of ₹ 1.99 crore.

Audit noticed that in six road works awarded during the period July 2010 to March 2014, YEIDA laid SDBC directly over granular base (Wet Mix Macadam) in contravention to the aforesaid IRC guidelines though in other road works, close graded premix surfacing was used by YEIDA. Thus, YEIDA incurred avoidable expenditure of ₹ 1.99 crore on laying of SDBC in place of close graded premix surfacing (**Appendix-4.9)**.

In its reply, YEIDA stated (November 2022) that the work of semi-dense bituminous concrete as wearing course was done in accordance with IRC guidelines and specifications adopted by GNIDA which prescribe semi-dense bituminous concrete as one of the alternatives for wearing course.

The reply is not acceptable as IRC guidelines provide that SDBC can be used as wearing course only after laying a binder course (Bituminous Macadam or Dense Graded Bituminous Macadam). As in above cases, binder course was not laid, provision for other type of wearing courses such as close graded premix surfacing should have been done.

Unwarranted execution of seal coat in road works

4.5.5 As per Indian Roads Congress (IRC) guidelines (IRC:14-2004) and Specifications for Road and Bridge Works issued by Ministry of Road Transport and Highways (MoRTH) seal coat is to be applied after laying open graded premix carpet. There was, however, no requirement for applying seal coat after laying close graded premix surfacing as per IRC guidelines (IRC:SP: 78-2008) and MoRTH specifications.

Audit noticed that in two road work contracts[31], the Project Department of YEIDA executed the work of applying of seal coat as an extra item at a cost of ₹ 1.82 crore after laying close graded premix surfacing. The unwarranted execution of the aforesaid work has resulted in avoidable extra expenditure of ₹ 1.82 crore as detailed in **Table 4.4** below:

Table 4.4: Details of expenditure on seal coat

Sl. No.	Name of work and contractor	Date of award	Qty. executed (in sqm)	Rate (₹ per sqm)	Amount (₹ in lakh)
1.	Construction of roads, drains and culverts (Prefix-I) - Indu Projects Ltd.	31.05.2010	1,02,309.00	66.00	67.52
2.	Construction of roads, drains and culverts (Prefix-III) - Indu Projects Ltd.	31.05.2010	1,56,986.00	72.90	114.44
	Total				**181.96**

Source: Concerned files of YEIDA

In its reply, YEIDA stated (November 2022) that although seal coat is provided in case of open graded premix surfacing, the same was done in the instant cases to close the voids properly considering importance of the roads and to prevent damage from water logging. It further stated that except for these contracts the work of seal coat was not done in any other contract.

31 (i) Construction of roads, drains and culverts (Prefix-I) awarded (May 2010) to Indu Projects Ltd.; and (ii) Construction of roads, drains and culverts (Prefix-III) awarded (May 2010) to Indu Projects Ltd.

The reply is not acceptable because IRC guidelines and MORTH specifications do not prescribe laying of seal coat in case of close graded premix surfacing. Further, YEIDA itself admitted that it had not executed laying of seal coat in other cases.

Recommendation No. 12

YEIDA should ensure that the applicable IRC guidelines and specifications are strictly adhered to in its road construction works.

Statutory provisions not complied with

4.6 Audit noticed that provisions of tender documents, Government Orders/ notifications and statutes were not complied with in execution of construction and development works by YEIDA which are discussed in detail in the succeeding paragraphs.

Short recovery against execution of sub-standard work

4.6.1 The terms and conditions of the tenders provide that the contractor shall submit a bill each month for all works executed by it in the previous month. The Engineer-in-Charge (EnC) shall then take the requisite measurement and approve the sum payable to the contractor against such executed work. It further provided that if it shall appear to the EnC that any work has been executed with unsound, imperfect or unskilled workmanship or with materials of any inferior description, the contractor shall, notwithstanding that the same may have been inadvertently passed, certified and paid for, rectify or remove and reconstruct the work at his own cost. In the event of the contractor failing to do so within a specified period, the EnC may rectify or remove and re-execute the work at the risk and expense of the contractor.

YEIDA awarded (October 2009 to May 2011) the work of construction of various stretches of 60 metre wide road along Yamuna Expressway to three contractors at a cost of ₹ 34.57 crore. As per the bill of quantity (BOQ) of the work, the thickness of pavement crust was 505 mm comprising of Granular Sub-Base (GSB) - 230 mm; Water Mix Macadam (WMM) - 250 mm and Close Graded Premix Surfacing/ Semi-Dense Bituminous Concrete (SDBC) - 25 mm. The aforesaid works were completed by the contractors up to June 2014 at a cost of ₹ 34.12 crore.

YEIDA short recovered ₹ 1.87 crore from three contractors in lieu of the cost of repair of damaged road.

Subsequently, the roads were damaged due to heavy traffic. In view of above, YEIDA engaged (November 2013) Central Road Research Institute (CRRI) to investigate and recommend remedial measures for strengthening of the damaged roads. During site inspection by CRRI and subsequently by a joint committee of YEIDA and RITES Limited, it was found that the pavement crust thickness executed by the contractors was actually less than the thickness provided in the BOQ. Accordingly, YEIDA decided (June 2015) to recover an amount of ₹ 3.33 crore equivalent to the cost of less quantity executed (₹ 2.98 crore) by the contractors along with penalty (₹ 0.35 crore) at the rate of one *per cent* of the contract amount as detailed in **Appendix-4.10**. However, the cost of repair of the damaged roads was worked out at ₹ 4.85 crore by Audit on the basis of recommendation of RITES Limited for providing overlay after correction of bituminous surface. Thus, YEIDA short recovered ₹ 1.87 crore[32] on account of repair of road (**Appendix-4.11**).

[32] ₹ 1.87 crore = (₹ 4.85 crore - ₹ 2.98 crore).

Further, out of the aforesaid three contractors, two contractors executed repair works equivalent to the amount of recovery imposed by YEIDA. One contractor, however, neither executed any works nor deposited any amount against the recoverable amount of ₹ 0.96 crore till date (April 2022).

In its reply, YEIDA stated (November 2022) that the works have been executed as per detailed designs provided by the consultant which were approved by YEIDA. Further, due to higher traffic of vehicles and not executing works relating to drainage in view of stay orders/farmers' agitation, the road got damaged at some places and crust thickness was depleted. It further stated that Recovery Certificate for pending recovery from the contractor has been issued through DM Office.

The reply is not acceptable as YEIDA itself imposed penalty and recovered the cost of less executed work from the contractors. Besides, YEIDA did not fix any responsibility against its officials of the Project Department for incorrect measurements at the time of construction of road resulting in sub-standard construction of roads and excess payments to the contractors.

Short deduction and short deposit of Workers' Welfare Cess

4.6.2 The Government of India (GoI) enacted the Building and Other Construction Workers' Welfare Cess Act, 1996 (Cess Act) and framed the Building and Other Construction Workers' Welfare Cess Rules, 1998 (Cess Rules) which provided for levy and collection of a cess[33] on the cost of construction incurred by employers. The aforesaid Act and Rules were made applicable in the State of Uttar Pradesh with the notification (February 2009[34]) of the 'Uttar Pradesh Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2009[35] (Rules) by the State Government. The State Government also constituted (November 2009[36]) the 'Uttar Pradesh Building and Other Construction Workers' Welfare Board' (Board) under Section 18 of the Act[37]. Rule 4 (3) of the Cess Rules provides that where the levy of Cess pertains to building and other construction work of a Government or of a PSU, such Government or the PSU shall deduct or cause to be deducted the Cess payable at the notified rates from the bills paid for such works.

YEIDA short deducted Workers' Welfare Cess amounting to ₹ 1.91 crore from the bills of 42 contractors.

Audit noticed that in 42 contracts entered (October 2009 to March 2021) into by YEIDA for execution of various development and construction works, the cost of works was inclusive of all taxes and levies payable under the respective statutes. YEIDA made payments amounting to ₹ 499.57 crore against these contracts but deducted Cess amounting to ₹ 3.09 crore against deductible amount of ₹ five crore[38]. This resulted in short deduction and deposit of Cess with the Board amounting to ₹ 1.91 crore (**Appendix-4.12**). Thus, YEIDA failed to comply with its statutory obligation of deducting and depositing the due amount of Cess and also extended undue benefit to the contractors.

[33] At a rate not exceeding two *per cent*, but not less than one *per cent*.
[34] Notification No. 143/36-2-2009-251(SM)/95 dated 04 February 2009.
[35] Framed in exercise of powers conferred by Section 40 read with Section 62 of the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.
[36] Notification No. 1411/36-2-2009-251(SM)/95 dated 20 November 2009.
[37] The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.
[38] At the rate of one *per cent* of the total cost.

In its reply, YEIDA stated (November 2022) that provision for Cess was not made in the estimates of works awarded during the period 2009-10 to 2013-14, as the order for deduction was passed by General Manager (Project) in August 2013. Since, 2014-15, provision for Cess is being made in the estimates and accordingly deducted from the bills of the contractors.

The reply is not acceptable because the price quoted by the contractors was inclusive of all taxes and levies, hence, YEIDA should have deducted Cess invariably from the bills of the contractors since its applicability in February 2009.

Royalty on minor minerals short deducted

4.6.3 The Uttar Pradesh Minor Mineral Concession (UPMMC) Rules, 1963 and the Uttar Pradesh Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2002 stipulate that no person shall transport any mineral without a valid transit pass (Form MM-11[39]/Form-C[40]). Further, Section 21(5) of the Mines and Minerals (Development and Regulation) Act, 1957 stipulates that the price of minerals along with the royalty may be recovered for raising minerals without lawful authority. GoUP in its order dated 15 October 2015 reiterated that apart from royalty, the cost of minerals (ordinarily five times of royalty) be deducted from the bills of contractors and deposited into the treasury, if the contractors do not produce the requisite valid transit pass in the form MM-11.

YEIDA failed to deduct royalty and cost of minor minerals amounting to ₹ 35.71 crore from the bills of contractors.

Audit noticed that YEIDA executes various development and construction works through contractors wherein the contractors use minor minerals such as stone grit, coarse sand, fine sand, *etc.* YEIDA, however, did not obtain the requisite transit pass in Form MM-11. Further, against an amount of ₹ 35.95 crore[41] to be deducted from the bills of the contractors towards royalty along with cost of minerals in 42 contracts awarded during the period October 2009 to June 2020, YEIDA had deducted an amount of ₹ 0.24 crore only in seven contracts resulting in short-deduction of ₹ 35.71 crore as detailed in **Appendix-4.13**. Thus, YEIDA failed to protect Government revenue.

In its reply, YEIDA stated (November 2022) that as the Authority makes payment for complete item, it did not examine royalty payment on components of that item. It further stated that contractors take supply from quarries and pay royalty themselves. Besides, in National Capital Region, construction materials are generally brought from outside States, hence, they are brought in the State only after payment of royalty at State's border.

The reply corroborates that YEIDA failed to deduct the statutory dues from the bills of contractors even when the valid transit pass in the Form MM-11 was not furnished by the contractors and thus, did not guard Government interest.

Recommendation No. 13

YEIDA should ensure deduction of statutory dues from the payment made to the contractors.

---

[39] Transit pass (Rawanna) issued by the holder of the mining lease or crusher plant for transportation of minor minerals. It includes name and address of the lease holder, nature and quantity of minerals and vehicle registration number through which the minerals are to be transported.

[40] The holder of license for storage of minerals shall issue transit pass in 'Form-C' for lawful transportation of minerals from the store.

[41] Royalty amounting to ₹ 5.99 crore and cost of mineral amounting to ₹ 29.96 crore.

Payment without obtaining Consignee Receipt Certificates

4.6.4 GoUP order (May 2009) provided that original Consignee Receipt Certificates (CRCs) must be obtained from contractors before making any payment for bitumen work and the same should be crossed and attached with the bill of the contractor to ensure the quality of road works and it should be directly procured from the refinery.

Audit noticed that YEIDA had not incorporated any condition in the tender documents requiring the contractor to produce original CRCs at the time of claiming payment for bitumen. As a result, YEIDA did not obtain CRCs from contractors for execution of bitumen works amounting to ₹ 22.68 crore in 15 contracts awarded during the period October 2009 to September 2019 as detailed in **Appendix-4.14**. Hence, the quality of bitumen and therefore, the quality of road works could not be ensured in accordance with aforesaid GoUP order.

In its reply, YEIDA stated (November 2022) that YEIDA itself does not procure bitumen and tenders are invited for execution of works including supply of all materials. Besides, third-party lab testing is done before making any payments. It further stated that in view of orders of GoUP and suggestion of Audit, system for obtaining CRCs will be implemented after taking approval from the competent authority.

The fact remains that YEIDA failed to obtain copies of CRCs from the contractors before making any payment for bitumen work.

Environmental Clearance not obtained

4.6.5 As per the notification[42] (14 September 2006) issued by the Ministry of Environment and Forests, Government of India, prior Environmental Clearance (EC) is required to be obtained from the State Environment Impact Assessment Authority (SEIAA) for townships and area development projects covering an area greater than 50 hectares (5,00,000 sqm) and/or built up area greater than 1,50,000 sqm before any construction work or preparation of land is started on the project.

Audit noticed that YEIDA executed development and construction activities in its industrial development area without obtaining prior EC from SEIAA. As a result, YEIDA failed to ensure that the development and construction activities are carried out in an environmentally sustainable manner with due consideration for potential adverse impacts on the environment and take appropriate measures to mitigate such impacts.

In its reply, YEIDA stated (November 2022) that it has obtained EC from SEIAA in respect of its group housing projects. Besides, builders to whom plots have been allotted by YEIDA have also obtained EC.

The reply is not acceptable because YEIDA failed to obtain prior EC from SEIAA for its industrial development area before execution of developmental/ construction works, which was required to be obtained in addition to individual projects. It is pertinent to note that GNIDA had obtained EC for its Master Plan area on 12 October 2013.

[42] Clause 8(b) of Schedule to para 2 and 7 of the Notification (List of projects or activities requiring prior environmental clearance).

Good practices observed in the sampled cases

4.7 In the sampled cases test checked in audit, following good practices were noticed in execution of development and construction activities by YEIDA to minimise deficiencies in execution of works:

- In case of projects having value of ₹ 10 crore and above, YEIDA engaged IITs for vetting of designs and estimates of construction works.
- Quality control tests of the executed works were conducted by third parties.

Conclusion

YEIDA did not prepare Annual Plans resulting in ineffective monitoring and consequent under utilisation of allocated funds as well as blockade of funds spent on incomplete works. Works were not executed in accordance with the applicable guidelines/specifications resulting in avoidable extra expenditure. The works were awarded at higher rates due to incorrect assessment of justified cost and not considering rates of similar works awarded in the past. YEIDA compromised on safeguarding its financial interests by obtaining less performance guarantee/security deposit from the contractors. Statutory dues *viz.* royalty and Workers' Welfare Cess were not deducted from the bills of the contractors in accordance with the provisions of the relevant Acts/Government Orders. Public interest was not protected due to executing development and construction activities in YEIDA's industrial development area without obtaining prior environmental clearance which was required to be obtained for townships and area development projects of more than 50 hectare.