



SUPREME AUDIT INSTITUTION OF INDIA  
लोकहितार्थं सत्यनिष्ठा  
Dedicated to Truth in Public Interest

**Report of the  
Comptroller and Auditor General of India  
on  
Implementation of Smart Cities Mission in  
Dehradun**



उत्तराखण्ड शासन

**Government of Uttarakhand  
Report No. 5 of 2025  
(Performance Audit - Commercial)**



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## PREFACE

This Report of the Comptroller and Auditor General of India for the year ended 31 March 2023 has been prepared for submission to the Governor of the State of Uttarakhand under Article 151 (2) of the Constitution of India for being laid before the State Legislature.

The Report contains the results of the Performance Audit on “Implementation of Smart Cities Mission in Dehradun”, covering the period 2017-18 to 2022-23.

The instances mentioned in this Report are those, which came to notice in the course of audit for the period 2017-18 to 2022-23; but could not be reported in the previous Audit Reports. The matters relating to the period subsequent to 2022-23 have also been included, wherever necessary.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

Audit acknowledges the co-operation received from Government of Uttarakhand at each stage of the audit process.



# **Executive Summary**



## Executive Summary

### About this Report

Government of India launched Smart Cities Mission (SCM) on 25 June 2015 with the objective to promote cities that provide core infrastructure, decent quality of life to its citizens, clean and sustainable environment, and application of ‘Smart Solutions’. The Mission envisioned developing 100 cities in the country as Model Areas based on an area development plan selected through a city challenge process. These cities were selected in four rounds and Dehradun City was selected (June 2017) in the third round.

In Uttarakhand, Dehradun was the only city selected under the Mission. Dehradun Smart City Limited (DSCL) was incorporated (September 2017) as a Special Purpose Vehicle under the Companies Act, 2013, for implementation of the SCM in Dehradun.

### Why did we take up this Audit?

SCM is a centrally sponsored scheme for infrastructure up-gradation and smart applications. Initially, the SCM was to be completed by June 2023, but it was extended till June 2024. The budget provision under SCM for Dehradun was ₹ 1,000 crore in equal sharing pattern. An expenditure of ₹ 634.11 crore was incurred during the period 2016-17 to 2022-23 against the funds of ₹ 737.50 crore released during the said period.

The ‘Performance Audit of Implementation of Smart Cities Mission in Dehradun’ has been carried out during 2023-24, covering the period 2018-23. An attempt has been made in this Report to assess the implementation of the SCM at the ground level.

During current audit, a result-oriented approach has been adopted which assesses whether the programme interventions are performing as planned/intended. The performance audit has covered all 22 projects implemented during 2018-23. During evaluation of the projects, the records of Dehradun Smart City Limited, implementing agencies (PIU-PWD, PWD, Uttarakhand Peyjal Sansadhan Vikas evam Nirmaan Nigam and Irrigation Department) were examined.

Findings of this audit are expected to help make Government aware of performance of Smart Cities Mission and make the required course corrections, so that programme objectives can be fulfilled in a time bound and more effective manner.

### Main Audit Conclusions

Audit found that there is scope for improvement in implementation of SCM and Operation & Maintenance of the created infrastructure in terms of long-term sustainability as highlighted below:

- Numerous ‘Smart Solutions’ as outlined in the Detailed Project Report were dropped during execution or remained non-functional due to inadequate planning and implementation. A biometric and sensor based Solid Waste Management (SWM) module developed (March 2022) under e-Governance Solutions of Doon Integrated Command and Control Centre project to monitor the entire waste collection process on real-time basis, remained unutilised till February 2025, rendering expenditure of

₹ 4.55 crore unfruitful. The non-operation of e-rickshaws procured at the cost of ₹ 0.90 crore under the Smart Waste Vehicles project for almost two years highlights the lack of consistent and proactive management by DSCL.

‘Smart Solutions’ viz. interactive boards, computer lab, projectors, e-content, CCTVs, Biometric attendance installed in three Government Schools in Dehradun at the cost of ₹ 5.91 crore under the Smart Schools project remained non-functional due to inability of the Schools to afford huge electricity bills for their operation.

Projects like the Doon Integrated Command and Control Centre and the e-bus initiative also face sustainability concerns due to the absence of viable revenue generation models (e.g. commercial advertisements, smart Wi-Fi, royalty from e-Governance applications, and data monetisation).

Instances of wasteful expenditure of ₹ 2.62 crore on environmental sensors and ₹ 3.24 crore on Multi Utility Duct were also observed. The smart solution like uniform cross section of carriageway and dedicated pedestrian pathway, under the Smart Road project, were deficiently executed.

Certain positive outcomes such as improved traffic management, handling of public safety and security incidents, support to city administration, receiving an award by DSCL under the Doon Integrated Command and Control Centre project, and successful implementation of initiatives in the water supply sector, particularly SCADA<sup>1</sup> were also observed. Overall, the intended objectives of SCM - to provide core infrastructure, give a decent quality of life to its citizens and application of ‘Smart’ Solutions have been partially achieved. However, some ‘Smart Solutions’ have been implemented and are currently operational.

- The payment structure of Dehradun Smart City Limited for the Project Management Consultant (PMC) lacked milestone-based payment, leading to payments despite incomplete projects; PMC’s manpower deployment deviated from contract terms, resulting in unverified payments and inadmissible payment, undermining financial integrity.

Irregularities of ₹ 5.19 crore in PMC payments for remuneration claims and implementation of ‘City Investments to Innovate, Integrate and Sustain project’, including procurement violations and reimbursement without documentation, indicate laxity in scrutiny and contract adherence.

DSCL could not provide hindrance-free work front to the implementing agencies which led to significant delay, ranging from 19 months to 38 months, in completion of the eight projects as well as non-adjustment of advances. DSCL did not take action for adjustment of advances, and impose penalties amounting to ₹ 1.41 crore for project delays effectively. In cases where penalties were imposed, these were either insufficient or not fully enforced, resulting in undue benefit to the contractors. DSCL failed to recover unutilised amount of ₹ 19.06 crore from the implementing agency.

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<sup>1</sup> Supervisory Control and Data Acquisition (SCADA) is software which can be interfaced to Programmable Logic Controller/Intelligent remote terminal unit through suitable communication to read and present the information in graphical, animated form or make customised reports and control various functions of the system remotely at a Control Station.

Besides, issues related to cost escalation of ₹ 10.34 crore and execution of work costing ₹ 2.93 crore without inviting tenders were also observed.

- Instances of financial mismanagement such as loss of interest of ₹ 6.20 crore and non-recovery of interest amounting to ₹ 0.81 crore on mobilisation advance were noticed.
- Despite representatives from all the key line departments in State Level High Powered Steering Committee and constitution of inter-departmental coordination task force, the issue of lack of coordination among various line departments during implementation of projects could not be resolved. As a result, most of the projects were delayed due to want of encumbrance free projects sites. The idea of establishing Special Purpose Vehicle in the spirit of guidelines was ineffective due to not appointing full time Chief Executive Officer, Additional Chief Executive officer and Finance Controller in DSCL. Instances of lack of quality control issues were also noticed during implementation of the projects.

### What do we recommend?

1. The State Government should address operational shortcomings and ensure the functioning of non-operational infrastructure developed under the Smart Cities Mission.
2. The State Government should adopt strategies to increase revenue and ensure the sustainable operation of infrastructure developed under the Smart Cities Mission to minimise the gap between actual and projected revenue.
3. Responsibility should be fixed for unplanned and inefficient use of public funds leading to duplication and infructuous expenditure.
4. The State Government should ensure that payment terms linked with measurable project deliverables are incorporated in the future contracts.
5. Accountability should be fixed for irregularities in payments to PMC, including unverified payment, inadmissible payments, wasteful expenditure, procurement violations, and failure to adhere to contractual provisions.
6. The State Government should ensure that the ongoing projects are completed expeditiously in coordination with the line departments and implementing agencies.
7. The State Government should ensure prompt recovery of the unutilised amounts pending with the implementing agencies.
8. The State Government should ensure prompt recovery against overpayment and fix accountability.
9. The State Government should explicitly include the provision for interest rate to be charged on Mobilisation Advance, in the Procurement Rules.
10. The State Government should ensure that the key posts in the sensitive wings of DSCL like procurement and finance are filled from the government officials on deputation basis instead of contractual staff.

11. The State Government should take concrete action against the concerned officials and contractors responsible for substandard quality of works during execution of projects.
12. The State Government should strengthen the internal control mechanism to ensure compliance with laws, regulations and policies.

### **Management's response to Audit Recommendations**

Based on the audit findings, the audit team highlighted the key areas for improvement and made 12 specific recommendations as mentioned above. These recommendations are intended to address various operational issues and enhance aspects such as compliance, efficiency, and overall effectiveness within the organisation.

During the exit conference, the management reviewed each of the 12 recommendations, agreed with all of them, and assured the audit that these recommendations would be implemented in the future.

# **Chapter-1**

## **Introduction**



## Chapter - 1

### Introduction

*This Chapter provides an introduction on Smart Cities Mission, Smart Solutions' and features of Smart City, process of selection of Smart Cities, framework for implementation of Smart Cities Mission and organisational setup of Dehradun Smart City Limited. The Chapter also covers the Audit objectives, Audit criteria, Audit scope and the methodology adopted for the Performance Audit along with the structure of the Report.*

Government of India (GoI) launched (25 June 2015) the Smart Cities Mission (SCM) with the objective of promoting cities that provide core infrastructure, a decent quality of life to their citizens and a clean and sustainable environment through the application of 'Smart Solutions'.

SCM is a Centrally Sponsored Scheme (CSS) which provides for a financial support of ₹ 500 crore by the Centre for each selected city with an equal share by the State/ Urban Local Bodies (ULB). However, from May 2022, the funding pattern was changed to 90:10 for eight North Eastern States and three Himalayan States<sup>1</sup>.

#### 1.1 Smart Solutions and Features of Smart City

Paragraph 2.5 of the SCM guidelines provides the following illustrative list of 'Smart Solutions'. However, this list was not exhaustive, and cities were free to incorporate additional applications.

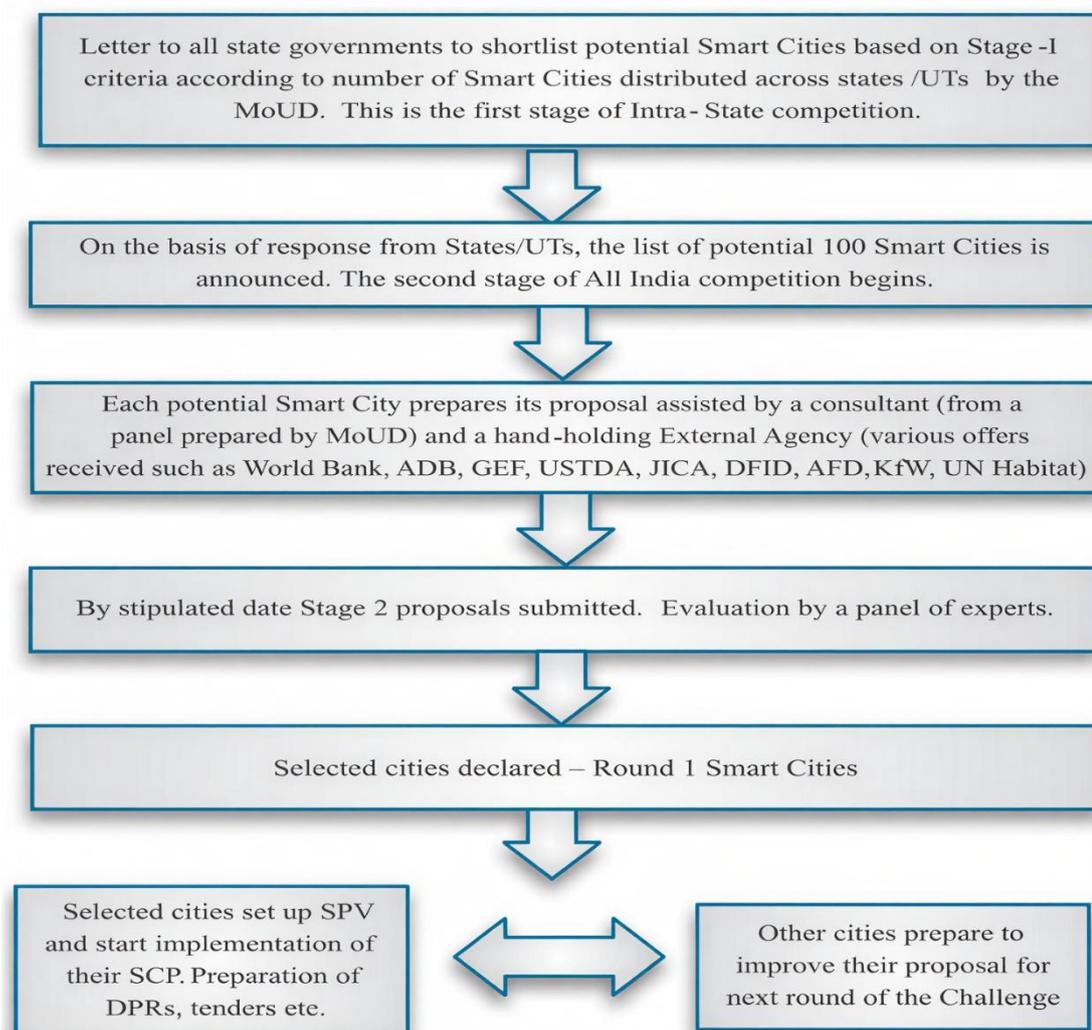


<sup>1</sup> Himachal Pradesh, Jammu & Kashmir and Uttarakhand.

Features of Smart City include promoting mixed land use in area-based developments, housing and inclusiveness, creating walkable localities, preserving and developing open spaces, promoting a variety of transport options, making governance citizen friendly and cost effective, giving an identity to the city and applying ‘Smart Solutions’ to infrastructure and services in area-based developments.

## **1.2 The Process of Selection of Smart Cities**

As per paragraph 9 of the SCM guidelines, each aspiring city competes for selection as a Smart City in the process called as ‘City Challenge’. The selection process consists of two Stages: Stage-I involves shortlisting of the cities by the States on the basis of the defined criteria *viz.* existing service level, institutional systems/ capacities, self-financing and past track record and reform. Stage-II is the Challenge round, where the final selection of a Smart City takes place. In Stage-II, Smart City Proposal (SCP) containing the vision, plan for mobilisation of resources and the intended outcomes in terms of infrastructure up-gradation and smart applications was to be prepared by the cities for evaluation by a committee involving a panel of national and international expert, organisations and institution at Ministry of Housing and Urban Affairs (MoHUA) level. Different steps involved in the selection of Smart Cities are given below:



### 1.3 Framework for Implementation of SCM in Uttarakhand

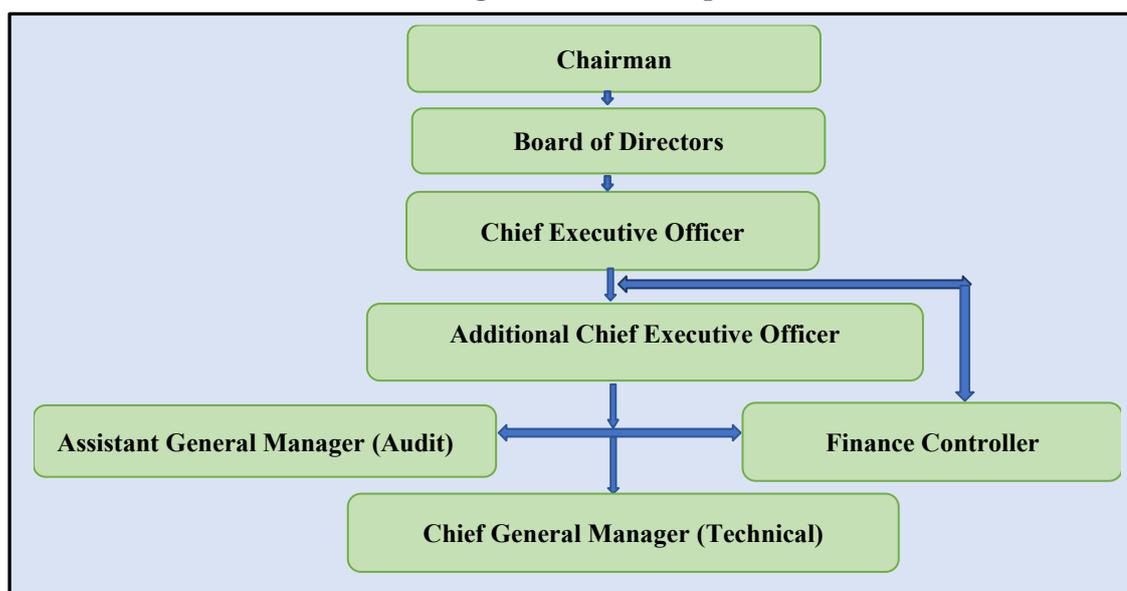
The SCM envisioned developing 100 cities in the country as replicable model based on area-based development and pan city initiatives with ‘Smart Solutions’, selected through a ‘City Challenge Process’. These cities were selected in four rounds during the period from January 2016 to June 2018. The implementation of the SCM at the city level required establishment of a Special Purpose Vehicle (SPV). In Uttarakhand, Dehradun was the only city selected in the third round on 23 June 2017 under the SCM.

The SCM was implemented by the Urban Development Department (UDD) of the Government of Uttarakhand (GoU), headed by the Principal Secretary/Secretary, who was also nominated as the State Mission–Director, Smart City. Under the UDD, Dehradun Smart City Limited (DSCL) was established as an SPV on 15 September 2017, under the Companies Act, 2013, to implement the SCM in Dehradun. The GoU also established (July 2015) two committees, the High-Powered Steering Committee (HPSC) and the Inter-Department Coordination Task Force, to implement and monitor the SCM as per the directions given by GoI and GoU from time to time. DSCL also established (November 2018) a Smart City Advisory Forum to advise and enable collaboration among various stakeholders<sup>2</sup>.

### 1.4 Organisational set-up of DSCL

The Divisional Commissioner of the Garhwal was nominated (August 2017) as the Chairman of DSCL. Apart from the Chairman, five other members were also nominated in August 2017 as Directors. The Chairman is assisted by the Chief Executive officer (CEO), Additional Chief Executive officer, Finance Controller, Assistant General Manager (Audit), Chief General Manager (Technical) and other various officers. Presently, there are 10 Directors in the Board of DSCL. The organisational set up of top management of DSCL is illustrated in **Chart-1.1** below:

**Chart-1.1: Organisational setup of DSCL**



<sup>2</sup> District Collector, MP, MLA, Mayor, CEO of SPV, local youths, technical experts, and at least one member from associations/societies.

DSCL executed projects through various implementing agencies and government departments, including Bridge & Roof Company (India) Limited<sup>3</sup>, Central Public Works Department, Public Works Department, the Irrigation Department, Uttarakhand Peyjal Sansadhan Vikas evam Nirman Nigam and Nagar Nigam Dehradun.

### **1.5 Audit objectives**

The main objectives of the performance audit were to assess whether:

1. The planning for the implementation of the SCM was adequate and effective and was aimed at achieving the objectives of the SCM;
2. Funds were released by the State Government to DSCL within the stipulated timeframe and mobilisation of balance funds by DSCL was efficient and in consideration with the objectives of the SCM;
3. The projects were implemented economically, efficiently, and effectively by the DSCL in accordance with the SCPs; and
4. The mechanism in place for monitoring the implementation and outcomes of the SCM was adequate and effective.

### **1.6 Audit criteria**

The main sources of audit criteria were the following:

- Smart Cities Mission Guidelines issued by Ministry of Housing and Urban Affairs (MoHUA), GoI in June 2015;
- Advisories issued by MoHUA;
- Sanctions and Release orders of MoHUA and Government of Uttarakhand (GoU);
- Minutes of State Level High Powered Steering Committee meetings, Board Meetings and Smart City Advisory Forum meetings, and Annual Accounts;
- Tender documents and terms and conditions of contract agreements executed for works and the applicable rules and orders; General Financial Rules, 2017;
- Uttarakhand Procurement Rules, 2017 and Budget Manual-2012; and
- Notifications, circulars and orders issued by the GoI/ GoU from time to time.

### **1.7 Audit scope and methodology**

The performance audit was carried out from July 2023 to December 2023, covering the period of execution of SCM projects from 2018-19 to 2022-23, to ascertain the economy, efficiency and effectiveness in the implementation of the SCM in Dehradun.

Records related to all 22 projects, as detailed in *Appendix-1.1*, implemented under the SCM, were examined at the DSCL and implementing agencies<sup>4</sup> (IAs) level. Joint physical inspection of ongoing and completed projects was also carried out to assess the impact and actual achievement of the projects. Audit observations are based on data and evidence gathered from the audited entity. Additionally, photographs taken during

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<sup>3</sup> A Public Sector Enterprise under Ministry of Heavy Industries, GoI.

<sup>4</sup> Public Works Department, Irrigation Department and Uttarakhand Peyjal Sansadhan Vikas Evam Nirman Nigam.

the physical inspection of the projects by the Audit with the representatives of the respective IAs, also form the basis of audit observations. The draft Performance Audit Report was issued to the Government and the Management on 11 April 2024 and reply of the Government was received on 30 May 2024.

### **1.8 Entry and Exit Conference**

Before commencement of the Audit, the audit objectives, criteria, audit scope and methodology and timeframe of the Performance Audit were discussed (25 July 2023) with the Management of DSCL in an Entry Conference<sup>5</sup>. The Exit Conference was conducted on 21 June 2024 and the audit findings were discussed with the Additional Secretary, Urban Development Department, GoU, CEO, DSCL and other departmental heads/representatives of the IAs. The replies/views of the Government have suitably been incorporated in the Report at the appropriate places.

### **1.9 Acknowledgement**

Audit is thankful for the co-operation and support extended by CEO, DSCL and Officers-in-charge of IAs in providing records, information and clarifications from time to time for the smooth conduct of audit. However, the records mentioned in subsequent paragraph were not provided to the audit.

### **1.10 Constraints/Limitations**

Despite repeated request and intervention of the Chief Secretary, GoU, DSCL did not furnish the records<sup>6</sup> pertaining to the preparation of both the original and the revised SCP to the audit. As a result, the audit was unable to review records relating to the activities such as consultations with city residents/other stakeholders, process for selection of projects and proposals for financing them within the SCP.

### **1.11 Structure of the report**

The Performance Audit Report has been structured into five chapters, as outlined below:

- **Chapter-1 : Introduction**
- **Chapter-2 : Project Management and Execution**
- **Chapter-3 : Contract Management**
- **Chapter-4 : Financial Irregularities**
- **Chapter-5 : Governance Framework**

<sup>5</sup> No representative of GoU participated in the Entry Conference.

<sup>6</sup> (i) Documents pertaining to citizen consultations conducted prior to the preparation of the SCP. (ii) Details of the procedure followed to select the consultant for preparation of the SCP (iii) Records relating to the evaluation/assessment undertaken to identify the area for project implementation. (iv) Criteria adopted for selection of each project under the SCM (v) Copies of both the original and the revised SCP submitted to MoHUA.



**Chapter-2**  
**Project Management and Execution**



## Chapter - 2

### Project Management and Execution

*This Chapter highlights audit findings on the achievement of Smart Cities Mission (SCM). Numerous 'Smart Solutions' outlined in the Detailed Project Report (DPR) were dropped during execution or remained non-functional due to inadequate planning and implementation, while some of them have been implemented and are currently operational. However, certain projects such as Doon Integrated Command and Control Centre and e-bus initiatives encountered sustainability issues due to lack of viable revenue generation models. Instances of wasteful expenditure of ₹6.17 crore were also observed. There was successful execution of some projects, particularly in the field of water supply like SCADA. Overall, the intended objectives of SCM - to provide core infrastructure, give a decent quality of life to its citizens and application of 'Smart Solutions' have been partially achieved. Besides, this Chapter also includes case studies and good practices relating to certain projects executed under SCM.*

The objective of SCM was to promote cities that provide core infrastructure and give a decent quality of life to their citizens, a clean and sustainable environment and application of 'Smart Solutions'. The focus was on sustainable and inclusive development and the idea was to look at compact areas, create a replicable model which would act like a light house to other aspiring cities. The SCM was planned to be executed through two approaches: Area-Based Development (ABD) and a Pan-city initiatives. ABD approach envisioned to transform existing areas by retrofitting and redeveloping into better planned ones, thereby improving livability of the existing area. Pan-city development envisaged application of selected 'Smart Solutions'<sup>1</sup> to the existing city-wide infrastructure. The ABD area, as outlined in the SCP of Dehradun, encompasses 875 acres of the core old city area of Dehradun as depicted in map (Picture-2.1) below:



Picture-2.1: ABD Area

<sup>1</sup> Application of 'Smart Solutions' will enable cities to use technology, information and data to improve infrastructure and services.

DSCL had identified (September 2018) 33 Projects valuing ₹ 1,359.80 crore for implementation under the revised Smart City Proposal (SCP). However, total 22 projects<sup>2</sup> valuing ₹ 1,021.54 crore<sup>3</sup> have been implemented under SCM. Out of total 22 projects implemented under SCM in Dehradun; 14 projects were executed under Area-based development while remaining eight projects were executed under Pan city initiatives.

## 2.1 Status of Projects under SCM

Out of 22 projects, eight projects were under progress and 14 had been completed till March 2023 as summarised in **Table-2.1** below and detailed in *Appendix-1.1*.

**Table-2.1: Status of projects as on 31<sup>st</sup> March 2023**

Sl. No.	Name of Project	Sanctioned financial outlay (₹ in crore)	Status	Location
1	Doon Integrated Command and Control Centre	307.83	Completed	PAN City
2	City Investments to Innovate, Integrate and Sustain	58.50	Under progress	
3	Smart Water Management (SCADA)	53.40	Completed	
4	Electric Buses	41.56	Completed	
5	Smart Waste Vehicle	21.28	Completed	
6	Water ATM	1.98	Completed	
7	Smart toilet	1.73	Completed	
8	Monumental Flag	0.10	Completed	
9	Smart Poles	--	Under progress	
10	Integrated Office Complex Green Building	204.46	Under progress	ABD Area
11	Smart Roads	190.54	Under progress	
12	Water supply Augmentation and Smart Meters	32.59	Under progress	
13	Integrated Sewerage Work	28.41	Under progress	
14	Rejuvenation of Parade Ground	20.87	Completed	
15	Integrated Drainage Work	16.27	Under progress	
16	Pedestrianisation of Paltan Bazaar	13.10	Completed	
17	Modern Doon Library	12.33	Completed	
18	Smart School	6.05	Completed	
19	Façade rejuvenation of Paltan Bazar	4.79	Under progress	
20	Citizen Engagement/ Outreach Project	1.00	Completed	
21	Creche Building	0.90	Completed	
22	Digitisation of Collectorate and CDO Office	0.61	Completed	

The projects were evaluated in terms of the planning and execution of the proposed smart features and their functionality as well as sustainability, operation & maintenance and utilisation. The audit findings are discussed in the subsequent paragraphs.

## 2.2 Review of selection of projects under SCM

The cities under SCM were to be selected through a ‘City Challenge Process’ which included evaluation of SCP prepared by each city depicting the vision, plans for mobilisation of resources and the intended outcomes in terms of infrastructure up-gradation and smart applications in the city. The SCM guidelines emphasised that even though a particular model is not being prescribed, it is expected that the SCPs will include a large number of infrastructure services and ‘Smart Solutions’.

<sup>2</sup> Rest 11 projects valuing ₹ 182.53 crore were implemented by State agencies funded by their own resources.

<sup>3</sup> Including the CITIIS project costing ₹ 58.50 crore selected in February 2019.

The original SCP of Dehradun was prepared by the Mussoorie Dehradun Development Authority (MDDA). After approval of this SCP (June 2017) by MoHUA, GoI, DSCL came into existence as an SPV in September 2017 and it submitted a revised SCP (September 2018) to GoI.

The documents relating to the original SCP which led to selection of Dehradun under SCM and the revised SCP sent by DSCL later to GoI were not provided to Audit, as detailed in *paragraph 1.10* of *Chapter-1*. In absence of relevant documents, audit could not comment on the rationale of selection of the SCM projects.

During the Exit Conference (21 June 2024), the Government acknowledged the issue of non-production of records relating to preparation of both the original and the revised SCP to audit and explained that the SCP was prepared by the MDDA with the help of a consultant Price Water House Coopers Limited. After various amendments and approval from the Nagar Nigam Board, Dehradun (NND), the SCP was forwarded to MoHUA. The Government also assured that DSCL would provide the records to the audit after obtaining them either from MDDA, NND or MoHUA. However, no status thereof was intimated to the audit so far (October 2024).

### **2.2.1 Non-implementation of the selected project**

As per Paragraph 6.2 of the SCM Guidelines, assured electricity supply with at least 10 *per cent* of the Smart City's energy requirement coming from solar was one of the essential features to be implemented under the SCM. Scrutiny of the records revealed that a project "Solar Energy Solution," amounting to ₹ 10.00 crore, was included in the revised SCP. However, this project was not implemented by DSCL despite a clear provision in the SCM guidelines.

The Government replied (30 May 2024) that the "Solar Rooftop on Government Buildings" project is being carried out by the "Uttarakhand Renewable Energy Development Agency" (UREDA) using its own resources. However, no detail/evidence was provided by DSCL to the audit regarding smart city energy requirement and coverage of Government buildings under the project. Further, information obtained from UREDA revealed that, under the "Solar Rooftop on Government Buildings" scheme, a total solar plant capacity of only 91 kilowatts was installed on 10 Government buildings in Dehradun between 2018-19 and 2022-23, which was not covering even 0.02 *per cent* against the envisaged minimum 10 *per cent* of city's energy requirement.

### **2.2.2 Implementation of projects beyond the SCP**

As per paragraph 6.1 of SCM Guidelines, cities were required to prepare their SCP containing the vision, plan for mobilisation of resources and the intended outcomes in terms of infrastructure up-gradation and smart applications. However, it was observed that two projects - Digitisation of the Collectorate Office and Tehsil Office and Monumental Flag were not included in the revised SCP but were executed at the cost of ₹ 56.29 lakh and ₹ 9.28 lakh respectively under the SCM. Both the projects were funded by DSCL from the project fund of SCM. The project Digitisation of Collectorate Office and Tehsil Office (Sadar) aimed at procuring computers, printers, and scanners for implementation of e-office in the Collectorate and Tehsil offices. Under the project Monumental Flag, a 30.5 meter high National Flag at Dila Ram Chowk was installed.

No reply was furnished by the Government. However, the Management replied (November 2023) that Digitisation of the Collectorate Office was included in the SCP dated 08 September 2018 while Monumental Flag project was approved (13 July 2020) in the 14<sup>th</sup> Board meeting of DSCL.

The reply is not acceptable as the mentioned projects were not included in the revised SCP. Further, there was no specific approval of the Board for the project Monumental Flag.

### **2.3 Review of Implementation of ‘Smart Solutions’**

As per the SCM guidelines, the purpose of the SCM is to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, specially technology that leads to smart outcomes. Application of ‘Smart Solutions’ will involve the use of technology, information, and data to make infrastructure and services better.

Some of the examples of ‘Smart Solutions’ mentioned in the said guidelines includes e-Governance and Citizen Services, Waste Management, Water Management, Energy Management and Urban Mobility as detailed in *paragraph 1.1 of Chapter - 1*.

DSCL executed 22 projects under the SCM, of which, 15 projects envisaged ‘Smart Solutions’/proposed facilities viz. Smart traffic sensors, Environmental sensors, eco-friendly energy for transport, CCTV cameras, *etc.* under the respective projects as detailed in *Appendix-2.1*. Audit observed that during implementation of projects, numerous facilities proposed in the DPRs of projects like Smart Road, Pedestrianisation of Paltan Bazar, Smart Poles and Smart Toilet *etc.*, for execution, were dropped/modified on the approval of Board of DSCL/High Powered Steering Committee (HPSC) and those installed could not be made fully functional<sup>4</sup>, as detailed in *Appendix-2.1* and discussed in succeeding *paragraph 2.4* and case studies under *paragraph 2.5*.

Further, as outlined in the SCM guidelines, the project "Integrated Drainage Work" had provisions for incorporating ‘Smart Solutions’ such as wastewater recycling and storm water reuse. However, no such provision was made in the DPR, and rather than implementing these innovative solutions, the focus was solely on construction of new drains.

During the Exit Conference (21 June 2024), the Government accepted the facts and stated that heavy traffic and space constraints at the selected sites made it impractical to carry out the planned work. Regarding non-functioning of the aforesaid executed Smart Features, it was stated that DSCL is coordinating with the concerned authorities to ensure that the Smart Features become operational.

The reply is not acceptable as these issues should have been considered and sorted out at the planning stage. Further, the Government should strengthen the monitoring mechanism to ensure that the Smart Features are operational with emphasis on their operation and maintenance.

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<sup>4</sup> Red Light Violation Detection, Automatic Number Plate Reader, Smart traffic sensors, Speed Violation Detection, Variable Message Display, Emergency Call Box, Public Announcement System, Environmental sensors, RFID tags/system, Sensor based Taps, auto flush urinals system, interactive boards, computer lab, projectors, e-Content, CCTVs and Biometric for attendance.

## 2.4 Project Wise Analysis

Under the SCM, DSCL executed 22 projects<sup>5</sup> in ABD area and Pan city. The detailed analysis of 13 projects is discussed in the following paragraphs.

### 2.4.1 Doon Integrated Command and Control Centre

Integrated Command and Control Centres reduce the complexity of dealing with multiple technology systems/applications by integrating them into a common platform to leverage real-time intelligence for making informed decisions. The key objective of Doon Integrated Command and Control Centre (DICCC) project was to establish a collaborative framework where input from different functional departments such as Transport, Fire, Police, Meteorology *etc.* can be assimilated and analysed on a single platform; consequently, resulting in aggregated city level information. Further this aggregate city level information can be converted to actionable intelligence, which would be propagated to relevant stakeholders and citizens in a coordinated and collaborated manner.

To establish DICCC and other Integrated ‘Smart Solutions’, DSCL entered (22 July 2019) into an agreement with Master System Integrator<sup>6</sup> (MSI) at a total cost of ₹ 294.43 crore<sup>7</sup> with a scheduled date of completion (21 May 2020). An expenditure of ₹ 258.46 crore, including CAPEX of ₹ 223.12 crore, as detailed in **Appendix-2.2** was incurred on DICCC project till the date of audit (December 2023) after de-scoping works costing ₹ 4.05 crore (CAPEX) and ₹ 7.21 crore (OPEX). DICCC became operational from 15 March 2022 comprising Information and Communication Technology (ICT) enabled systems<sup>8</sup> having several end devices such as Variable Message Sign Boards, Emergency Call Box, cameras, sensors, traffic signal controllers *etc.* Shortcomings noticed in implementation of DICCC project are discussed in the succeeding paragraphs.

#### 2.4.1.1 Low operational availability of end devices

Clause 50.4 of the Service Level Agreement<sup>9</sup> provides that minimum uptime for field infrastructure like Public Address System-Loudspeakers, Environmental Sensors, Smart traffic detectors (Sensors and Controllers), CCTV and Other Equipment should be 97 *per cent* measured on monthly basis.

For functioning of DICCC, several end devices such as Public Address System-Loudspeakers, Environmental Sensors, Smart traffic detectors (Sensors and Controllers), CCTV *etc.* were installed. Operational availability of these end devices mainly depended upon network connectivity and power. During joint physical inspection of DICCC project conducted (07 November 2023) by the audit with the representative of DSCL, audit noticed low availability of operational end devices as shown in **Table-2.2** below:

<sup>5</sup> The 13 projects include detailed analysis of ten projects, case studies related to two projects discussed in paragraph 2.5, good practices related to one project (SCADA) described in paragraph 2.6. No significant findings were observed in the remaining nine projects.

<sup>6</sup> M/s Hewlett Packard Enterprise India Pvt. Ltd. (HPE).

<sup>7</sup> CAPEX: ₹ 227.90 crore and OPEX: ₹ 66.53 crore (for 60 months from the date of Final Go Live).

<sup>8</sup> Adaptive Traffic Control System (ATCS), Intelligent Traffic Management System (ITMS), Surveillance System, Public Address System, Solid Waste Management *etc.*

<sup>9</sup> Forming part of contract with the MSI.

**Table-2.2: Operational availability of end devices**

Sl. No.	Name of end device	No. of devices installed	Operational Status		Operational availability of end devices in per cent
			Active	Inactive	
1	Traffic lights	49	36	13	73
2	Surveillance Cameras	517	505	12	98
3	Red Light Violation Detection (RLVD)	105	56	49	53
4	Automatic Number Plate Reader (ANPR)	29	20	09	69
5	Smart traffic sensors (A & B)	76	21	55	28
6	Speed Violation Detection (SVD)	04	02	02	50
7	Variable Message Display (VMD) boards	50	27	23	54
8	Emergency Call Box (ECB)	107	60	47	56
9	Public Address System (PAS)	24	17	07	71
10	Environmental sensors	50	27	23	54

The operational availability of Surveillance Cameras was 98 per cent, however, the operational availability of other end devices ranged from 28 to 73 per cent as against minimum availability of 97 per cent.

During the Exit Conference (21 June 2024), the Management accepted the Audit observation and stated that operational availability of end devices was low due to unforeseen dismantling of end devices at various places. DSCL is expediting the process to get the end devices reinstalled at the earliest.

#### **2.4.1.2 Non-functional Solid Waste Management Module**

As per clause 4.15.1 of the contract with the MSI, NND was responsible for collection, segregation, transportation, dumping and processing of the city waste from door to door. There were several problems in the existing solid waste collection process such as lack of information about collection time and area; lack of proper system for monitoring, tracking collection & transportation vehicles *etc.*

To overcome these problems, DSCL developed (March 2022) through the MSI a biometric and sensor based Solid Waste Management (SWM) module under e-Governance Solutions of DICCC project to monitor the entire waste collection process on real-time basis. It had various Smart Features like a Global Positioning System (GPS), Radio Frequency Identification (RFID) tag/ Quick Response (QR) code *etc.* For this, various latest ICT components<sup>10</sup> were installed at the cost of ₹ 4.55 crore after de-scoping the works costing ₹ 1.59 crore.

During scrutiny of records, audit noticed that the module was made Go-live on 15 March 2022. However, various reports<sup>11</sup> available in e-Governance Solutions, as provided to audit, revealed that NND did not utilise the SWM module since its Go-live. DSCL sent (April 2022 and December 2022) several letters to NND for effective utilisation of SWM module but the module could not be utilised till February 2025. Thus, the objective to provide a transparent and comprehensive mechanism to monitor and manage the SWM process was not achieved and the expenditure of ₹ 4.55 crore remained unfruitful.

<sup>10</sup> RFID Reader (with controller), QR code, RFID tags, Bin level sensors, GPS, Biometric face recognition device, mobiles and Weigh Bridge Controller.

<sup>11</sup> MIS Reports, like Door-to-Door Vehicle details, House Hold Bin Collection Report, Vehicle Trip Report, Door to Door Waste Collection History Report, Weight Report, *etc.*

During the Exit Conference (21 June 2024), the Government accepted the Audit observation and assured that further correspondence would be made with NND to utilise the SWM Module. If any modification is proposed by NND, the same will be implemented and module will be handed over to NND.

The reply is not acceptable as despite existence of HPSC and Inter-Departmental Task Force, the DSCL and the Government could not ensure utilisation of module and the objective to provide a transparent and comprehensive mechanism to monitor and manage the SWM process could not be achieved.

#### **2.4.1.3 Disaster Recovery site not setup**

As per the Disaster Recovery Best Practices version 1.0 issued by Ministry of Electronics & Information Technology, GoI, adoption of Disaster recovery setup is important for all Departments to maintain availability of Government operations and resiliency of data/applications. Disaster Recovery aims at protecting the departments from the effects of significant catastrophic events<sup>12</sup>. It allows the department to quickly resume mission-critical functions after a disaster.

Considering the State Data Centre Policy that there should be a common Disaster Recovery site for all the applications of the State of Uttarakhand, DSCL Board (March 2021) decided to set up the Disaster Recovery Site at Information Technology Development Agency (ITDA), GoU for which, DSCL was not required to pay any amount to the ITDA. However, in a meeting (August 2021) of ITDA, it was decided that DSCL shall pay ₹ 57.22 lakhs (including O&M) per annum to ITDA.

Audit noticed that DSCL authorities gave sign off for final Go-live of DICCC on 15 March 2022 without ensuring setting up of disaster recovery site on its own or through ITDA. It is pertinent to mention that the DICCC, ITDA and State Data Centre are in the same building and in the region vulnerable to disasters (Seismic zone IV). Recently, flash flood like situation was created in the area of DICCC due to cloudburst on 25 August 2021 and 08 August 2023.

During the Exit Conference (21 June 2024), the Government accepted the audit observation and stated that disaster recovery site set up was in process by ITDA for which a server had been shifted to Bengaluru.

The reply is not acceptable as the server had been relocated to Bengaluru to provide services related to the Uniform Civil Code. Thus, in absence of Disaster Recovery site, critical operations of DICCC remained at risk.

#### **2.4.1.4 Security Audit not conducted**

As per para 7.7 & 7.7.1 of Guidelines for Indian Government Websites (January 2009), web application security is of paramount concern to owners as well as consumers of the website. Guideline provides that each website/application must undergo a security audit from empanelled agencies and clear the same, prior to hosting and after addition of new

<sup>12</sup> Human error, fire or explosions, power outage, epidemic/accidents, unexpected system updates & patches as given in Disaster Recovery Best Practices Version 1.0 issued by Ministry of Electronics & Information Tech., GoI.

modules. Further, Website Security Guidelines Version 1.0 issued (November 2017) by NIC-CERT provides that the security audit should be done every six months or as and when any changes are done to the source code.

Audit noticed that security audit of 14 applications integrated with DICCC was conducted by the Third-Party Auditor<sup>13</sup> engaged by DSCL through contract (08 January 2021) between June 2021 and January 2022 *i.e.*, during implementation phase of DICCC project as it was mandatory for final go live. There was no provision in the contract with Third-Party Auditor for subsequent security audit of applications. The security audit certificates of these applications expired on 09 February 2023. Despite change in version of five applications<sup>14</sup> and expiry of security audit certificates, security audit of these applications was not conducted since 10 February 2023. This oversight coupled with non-compliance of the aforesaid security guidelines poses a significant risk, as web application security is crucial for both the website owners and the consumers. Without regular security audits, there is a possibility that the integrity, confidentiality, and availability of the data and services provided through these applications are compromised, potentially leading to data breaches, unauthorised access, and other serious security incidents. Thus, it was imperative to prioritise and conduct timely security audits to ensure the ongoing protection of these critical applications.

During the Exit Conference (21 June 2024), the Government accepted the Audit observation and stated that security audit of DICCC application was being conducted by the Standardisation Testing and Quality Certification Directorate Team and would be completed soon.

#### **2.4.1.5 Lack of revenue generation model in DICCC**

The Ministry of Housing and Urban Affairs, GoI, issued a guidance note in June 2021 stipulating the identification and implementation of a revenue generation/monetisation strategy for various IT infrastructure based on feasibility and viability to ensure the long-term sustainability of the DICCC infrastructure.

Audit noticed that despite recommendations of MSI on revenue generation through commercial advertisement, smart Wi-Fi, royalty from e-Governance applications, data monetisation *etc.*, DSCL did not formulate or implement any revenue generation model even after lapse of two years since Go-Live of DICCC.

During the Exit Conference (21 June 2024), the Government accepted the facts and stated that various options of revenue generation for sustainability of DICCC project would be explored. It was also informed that DSCL had initiated a proposal for revenue sharing of amount collected through challans by traffic police department using Intelligent Traffic Management System (ITMS) application of DICCC project.

The reply is not acceptable as even after more than two years since Go-Live of DICCC, DSCL neither made any sincere efforts to prepare its own revenue generation model

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<sup>13</sup> M/s Bharat Electronics Limited.

<sup>14</sup> (i) Adaptive Traffic Control System (Version TIS 3.2.4.2), (ii) E-Gov. Citizen Portal Application (Version 2.0), (iii) Traffic Monitoring System Application (Version 4.2.0), (iv) Traffic Enforcement System Application (Version 15.0.0) and (v) Automatic Number Plate Reader Application (Version 9.5.0).

nor did it adopt the revenue generation model suggested by MSI. Thus, in absence of revenue generation model, DSCL was fully dependent on grants received from Central/State Government.

#### **2.4.1.6 Unfruitful expenditure of ₹ 2.62 crore on environmental sensors**

Audit noticed that despite availability of three Air Quality Monitoring Stations (AQMS) and one Continuous Air Quality Monitoring Station (CAQMS) operational in the city under Uttarakhand Pollution Control Board (UKPCB), as per the approved DPR (December 2018), DSCL procured (January 2020) and installed (November 2020), 50 environmental sensors at the cost of ₹ 2.37 crore during implementation phase of DICCC project without consulting UKPCB. The sensors did not comply with the National Ambient Air Quality Standards<sup>15</sup> notified (November 2009) by Central Pollution Control Board (CPCB) as these environmental sensors were not capable of measuring six<sup>16</sup> out of twelve parameters, which was also highlighted by UKPCB in its letter dated 10 October 2020. Thus, the Air Quality Index displayed on Variable Message Display (VMD) boards in the city was not calculated based on data captured through these sensors, instead, the same were being provided by UKPCB. After go live, DSCL also incurred an expenditure of ₹ 24.76 lakhs (up to December 2023) on operation and maintenance of these sensors.

Thus, expenditure of ₹ 2.62 crore incurred on installation of environmental sensors despite availability of operational AQMS and CAQMS of UKPCB remained unfruitful.

During the Exit Conference (21 June 2024), the Government accepted the audit observation and stated that DSCL in consultation with Uttarakhand Pollution Control Board, will try to shift and utilise the environmental sensors at other locations.

The reply is not tenable as environmental sensors installed by the DSCL were capturing only 06 out of 12 prescribed parameters as also pointed out by UKPCB. Hence, change of locations will not serve the purpose.

#### **2.4.1.7 Creation of liability of ₹ 70.29 lakh due to non-synchronisation of projects**

Under DICCC project of SCM, various IT equipment and VMD were installed at traffic junction, bus shelter, miscellaneous location by Hewlett Packard Enterprise (HPE, India). Audit scrutiny of records revealed that after completion (March 2022) of DICCC project, construction activities were also taken up by PWD divisions from their own funds as well as by DSCL under SCM at various traffic junction, bus shelter, miscellaneous location. Therefore, the VMDs and other IT equipment installed under DICCC project were dismantled. Further, it was found that HPE (India) had submitted (November 2023) a cost reimbursement of ₹ 0.12 crore for dismantling and an estimate of ₹ 1.91 crore for re-installation of IT equipment.

<sup>15</sup> Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>), Particulate Matter (PM 10), Particulate Matter (PM 2.5), Ozone (O<sub>3</sub>), Lead (Pb), Carbon Monoxide (CO), Ammonia (NH<sub>3</sub>), Benzene (C<sub>6</sub>H<sub>6</sub>), Benzo (a) Pyrene (BaP), Arsenic (As) and Nickel (Ni).

<sup>16</sup> Lead (Pb), Ammonia (NH<sub>3</sub>), Benzene (C<sub>6</sub>H<sub>6</sub>), Benzo (a), Pyrene (BaP), Arsenic (As) and Nickel (Ni).

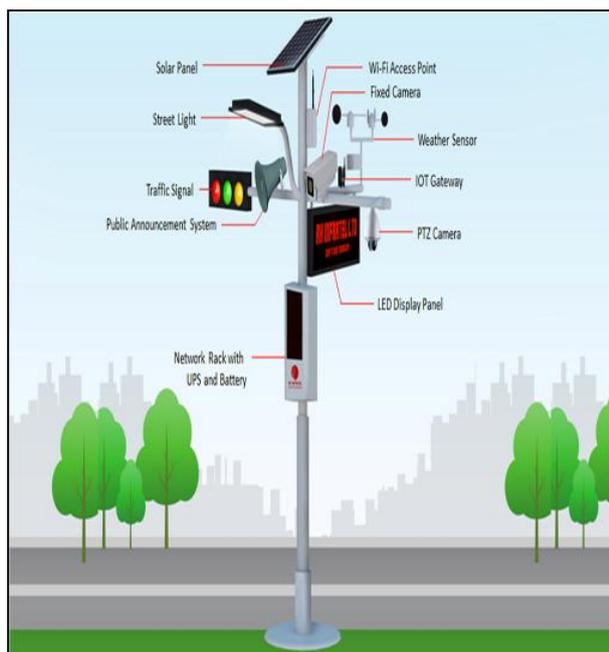
Audit scrutiny also revealed that the cost estimate amounting to ₹ 70.29 lakh as detailed in **Appendix-2.3**, pertained to dismantling and re-installation of IT equipment at 16 traffic junctions lying in the alignment of Smart Road project. Thus, non-synchronisation of projects to be executed under SCM, lack of planning, lack of coordination and delay in execution of Smart Road project resulted in creation of an extra financial liability of ₹ 70.29 lakh.

Government replied (30 May 2024) that the activities of dismantling and reinstallation were undertaken in response to the requirement of Smart Road project, which necessitated the temporary removal of the IT equipment installed at the intersections along the road alignment. The cost reimbursement and estimates submitted by HPE (India) reflects the necessary expenditures incurred due to these projects' dependencies and requirements.

The reply is not acceptable as both the projects *i.e.*, DICCC and Smart Road were under SCM, therefore, synchronisation should have been made by the DSCL to avoid financial liability of ₹ 70.29 lakh. In addition, it also affected the functionality of installed IT equipment as detailed in **Paragraph 2.4.1.1** above.

#### **2.4.2 Smart Poles on PPP mode**

DSCL planned project “Smart Poles” (as shown in **Picture-2.2** alongside) in the revised SCP to provide multiple services *e.g.*, Wi-Fi, Warm LED Luminaries, CCTV camera, Telecom Services and environmental monitoring sensors through Smart Poles in the city. For the above purpose, DSCL entered into an agreement (January 2020) on PPP/BOT mode with a Concessionaire<sup>17</sup> for supply, installation and maintenance of 130 Smart Poles with approximately 100 km Optical Fiber Cable (OFC) during the implementation period of 12 months from the date of contract.



**Picture-2.2: Smart Poles**

Installation of Smart Poles also

constituted source of revenue generation of ₹ 55.40 lakh per year (to be escalated by five *per cent* from the second year onward).

Audit found that the work could not be completed even after the lapse of almost three years from the scheduled date of implementation *i.e.*, January 2021. Out of 130 smart poles and 100 km OFC, only 27 Smart Poles and 70 km OFC respectively, were installed/laid till October 2023.

<sup>17</sup> M/s Indus Tower limited.

The main reason for the non-installation of Smart Poles was DSCL's failure to provide the required sites. According to the agreement, DSCL was obligated to provide the sites for Smart Poles within 15 days of signing of the agreement. However, by July 2021, DSCL had provided only 23 sites for pole installation. Over the next two years, up to October 2023, DSCL managed to provide only four additional sites for the Smart Poles. Regarding Smart Features, audit noticed that most of the Smart Features were not present in the Smart poles installed as detailed in *Appendix-2.1*. Upon joint physical inspection of six poles conducted (14 November 2023) by Audit with the representative of DSCL, it was noticed that only four poles were providing telecom services which entailed revenue generation of ₹ 32.21 lakh<sup>18</sup> up to July 2023. Remaining two poles<sup>19</sup> were not providing any services, despite being installed for two years as the necessary equipment<sup>20</sup> had not been mounted on them.

During the Exit Conference (21 June 2024), while accepting the audit observation, the Government stated that the installation sites proposed by the Project Management Consultant (PMC) lacked the necessary NOCs from the respective line departments. DSCL is now proposing to foreclose the contract. Regarding non-installation of Smart Features, no specific reply was furnished by the Government, however, the Management of the DSCL stated (December 2023) that the locations identified for poles were not suitable for Smart Features utilization point of view and two un-operated Smart Poles installed were planned to operate with pure fiber media. Fiber laying/connectivity was pending due to permission issue from the respective line departments.

The reply is not acceptable as these issues should have been considered and sorted out at the planning stage. Further, the statement of the DSCL to foreclose the contract will defeat the benefits envisaged under SCM.

#### **2.4.3 Integrated Office Complex Green Building**

Paragraph 37 of Uttarakhand Budget Manual provides that the estimates should be prepared with reasonable accuracy. The scrutiny related to the prescribed formalities like technical specification, costing, cost benefit analysis, survey of location and availability of land should be ensured.

The revised SCP submitted by the DSCL under the SCM included the construction of the "Integrated Office Complex Green Building" (Green Building) to centralise district-level offices for enhanced citizen convenience. The building, initially planned with seven floors along with a spacious basement, aimed to accommodate various administrative departments of the District.

The project "Green building", was approved (July 2019) by the HPSC at the cost of ₹ 204.46 crore<sup>21</sup>. The "Green building", proposed on land<sup>22</sup> owned by Uttarakhand

<sup>18</sup> ₹ 32.21 lakh = ₹13.09 lakh + ₹ 13.75 lakh + ₹ 2.75 lakh + ₹ 2.62 lakh.

<sup>19</sup> Near SP, Traffic Office (Near Doon Hospital) and Rajpur Road, Near Scholars Home School.

<sup>20</sup> Wi-fi Aps, Smart Warm LED light, CCTV, Environmental Sensors and Digital Billboard.

<sup>21</sup> ₹ 204.46 crore = ₹ 184.46 crore (For construction of Building) + ₹ 20.00 crore (Paid to UTC for utility shifting), out of which, ₹ 19.60 crore was refunded to DSCL in October 2020.

<sup>22</sup> In the existing workshop area of UTC on Hardwar Road.

Transport Corporation (UTC), was to be constructed by the implementing agency CPWD in terms of MoU executed (October 2019) with the scheduled date of completion December 2021.

Audit observed that, despite directions of the GoU, the proposed site could not be transferred to DSCL due to legal obstacles. In a meeting of HPSC (November 2020), it was decided to construct the Green Building at the existing Collectorate Campus. However, this site proved to be unfeasible due to practical issues in relocating the existing offices. Subsequently, in August 2022, it was decided to purchase the same site as previously planned, from the UTC for the Green Building. Finally, the GoU provided land to UTC in exchange for the proposed site and the land was transferred (December 2022) to Urban Development Department (UDD). Thereafter, the project could only commence in March 2024 with the revised scope of nine floors and two basements (costing ₹ 216.91 crore) approved (November 2023) in the Board meeting of DSCL. Up to September 2024, the physical and financial progress was 10 *per cent* and ₹ 10.63 crore respectively. This indicates that DSCL/HPSC lacked a strategic plan for the project, as it was unable to secure land from another department, nor did it evaluate the risk management associated with the capital project.

Thus, due to non-adherence to the budget manual regarding assurance of land before the proposal of the project, the construction work of the Green Building could commence only after four years from the approval, which also delayed the intended convenience to the public.

During the Exit Conference (21 June 2024), the Government informed that it had now been decided (February 2024) to construct the Green Building with six floors and two basements, at the revised cost of ₹ 206.00 crore, and the work has been commenced accordingly.

The reply of the Government itself indicates violation of the aforesaid provision of the State Budget Manual, which, in turn resulted in additional cost of ₹ 21.54 crore<sup>23</sup> and inordinate delay in construction of Green Building.

#### **2.4.4 Electric buses**

Project “Electric Bus” (costing ₹ 41.56 crore) was approved (June 2019) with an objective to introduce a new public transport system to minimize pollution and give fillip to the overall programme of using eco-friendly energy for transport. DSCL entered (04 March 2020) into an agreement with a firm<sup>24</sup> for “Supply, Operation and Maintenance of 30 air-conditioned fully built pure e-buses”. DPR forecasted a loss of ₹ 36.99 crore above the income from fare box and advertisement revenue over the seven years (2019-20 to 2026-27). The fleet of e-buses could be made operational on all the designated routes during February 2021 to December 2022. Till March 2023, total loss incurred amounted to ₹ 11.26 crore<sup>25</sup>.

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<sup>23</sup> ₹ 21.54 crore = ₹ 206.00 crore (final cost of the project) - ₹ 184.46 crore (initial sanctioned cost excluding cost of utility shifting of UTC).

<sup>24</sup> M/s EVEY Trans (UKS) Private Limited, Hyderabad.

<sup>25</sup> ₹ 11.26 crore = ₹ 14.62 crore (operational expenditure) – ₹ 3.36 crore (Receipt from March 2021 to March 2023).

Audit observed that:

- Due to higher fare charges and lower service frequency compared to other modes of transport operating on the same routes, the occupancy of e-buses remained low, resulting in DSCL earning only ₹ 1.29 lakh from e-bus operations against the anticipated daily revenue of ₹ 3.93 lakh.
- The commercial operation of the e-bus was started from February 2021, but the Board of DSCL did not take any cognizance of the low occupancy in the e-buses till audit (October 2023). After being pointed out by the audit, the Board of DSCL decided (November 2023) to reduce the minimum fare for the ISBT-Airport route from ₹ 100.00 to ₹ 10.00.
- The DSCL had not carried out any analysis of revenue received as it failed to provide the details of monthly revenue generated for each route for the period from February 2021 to June 2023. Audit analysis of the revenue for the month of July 2023 revealed that the average occupancy of e-buses ranged from 03 to 13 passengers per trip, as outlined in the **Appendix-2.4**. The issue of low occupancy in e-buses was further confirmed during joint physical inspection conducted (17 November 2023) by audit with representative of DSCL, where passenger count ranged from 03 to 12 per bus. The lowest occupancy, with only three passengers, was observed on the ISBT-Airport route as shown in the **Pictures-2.3** and **2.4** below:



Pictures-2.3 and 2.4: Lowest occupancies, with only three passengers as observed on the ISBT-Airport route

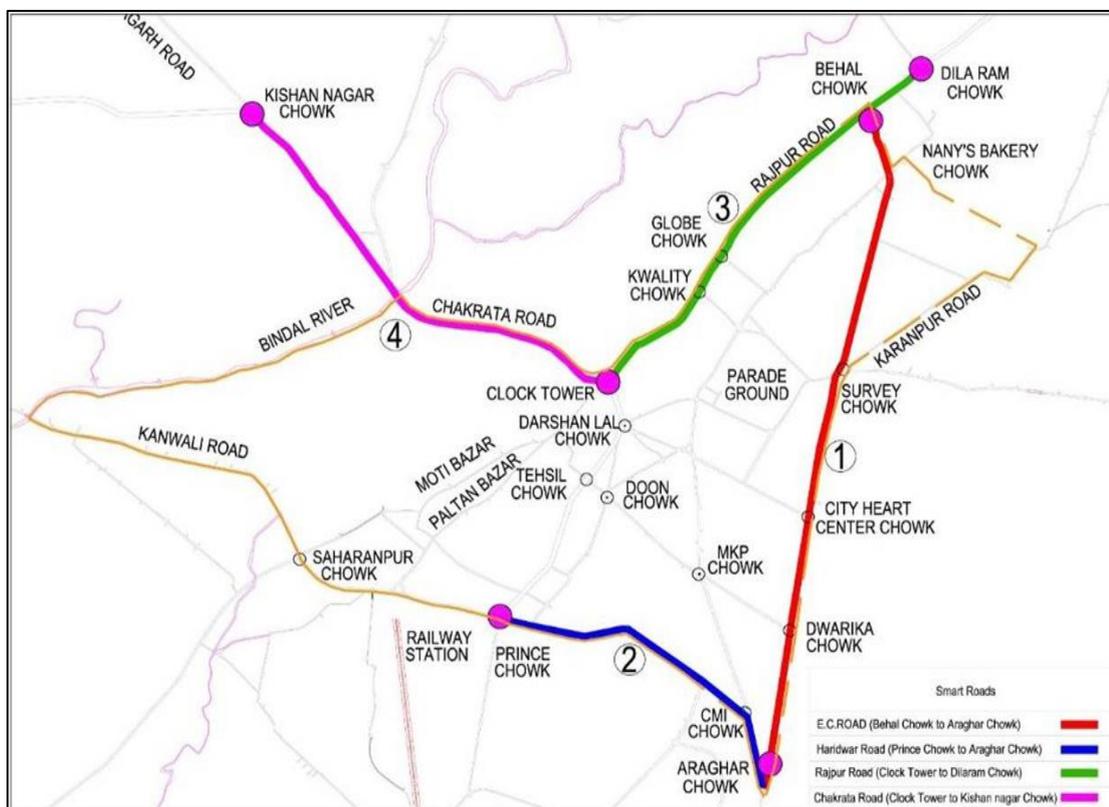
- The projected additional income from advertisements on the buses from 2021-22 to 2022-23 of operation was ₹ 1.01 crore. However, DSCL did not adopt any strategies to generate this additional revenue.

Thus, DSCL proceeded with the project without devising any remedial action plan such as exploring the strategies for generating additional revenue from advertisements, review of fare and routes, and frequency of buses to mitigate the loss.

During the Exit Conference (21 June 2024), while accepting the audit observation, the Government stated that plans for revenue generation, such as advertisements, would be implemented soon. It was also informed that buses had been reallocated to different routes to increase occupancy. However, no supporting documents were provided to audit, in this regard.

### 2.4.5 Smart Road Project

Smart Road was conceived as a combination of appropriate road infrastructure and supporting IT components that would assist all road users including vehicle users, pedestrians, cyclists, and differently abled persons to move comfortably.



Picture-2.5: Four major routes as depicted in map

Under the project, four major routes with a total length of 8.1 km as depicted in the map above (**Picture-2.5**) and detailed in **Table-2.3** below within the ABD area of Dehradun city were selected for the implementation of road infrastructure works integrated with Smart Road components. These routes encircle the city's core area, where mostly, the commercial activities are prominent.

**Table-2.3: Details of the selected routes with their length**

Sl. No.	Name of Road	From	To	Length (in km)
1	E. C. Road	Bahl Chowk	Aaraghar Chowk	2.9
2	Haridwar Road	Prince Chowk	Aaraghar Chowk	1.5
3	Rajpur Road	Clock tower	Dilaram Chowk	1.8
4	Chakrata Road	Clock tower	Kisan Nagar Chowk	1.9
<b>Total Length</b>				<b>8.1</b>

The estimated cost for the project as approved (March 2019) was ₹ 190.54 crore which was further revised (November 2020) to ₹ 206.88 crore due to inclusion of centage of ₹ 12.79 crore and utility shifting of ₹ 2.00 crore besides increase in Multi Utility Ducts<sup>26</sup> (MUD) cost by ₹ 1.55 crore.

<sup>26</sup> A Multi-Utility Duct (MUD), also known as a utility tunnel or common duct, is an underground structure that houses multiple utility services, such as electricity, water, telecom, sewage, and gas lines, in a single conduit.

Audit noticed the following shortcomings in the execution of the aforesaid projects as discussed below:

#### **2.4.5.1 Non-execution of Smart Features**

The scope of works in Smart Road project included up-gradation of the road through strengthening of the pavement, provision of drains, MUD, sewerage work, underground water supply lines, pedestrian friendly foot paths and crossings, organised parking and introduction of technological elements that would provide a safe and comfortable space for users of the road.

It was observed that ‘Smart Solutions’ as envisaged in the DPR were either partially executed (Uniform cross section of carriageway and dedicated pedestrian pathway) or not executed (Electric vehicles charging stations, pedestrian crossing in tabletop type, smart LED lighting with sensors and designated parking lots with sensors) except MUD which consisted of undergrounding of overhead electric lines. The status of execution of Smart Features of Smart Road under the project is given in **Appendix-2.1**.

Thus, due to elimination of ‘Smart Solutions’ from the scope of work, the emphasis shifted from ‘Smart Solutions’ to only civil infrastructure work and there were no substantial changes indicative of smartness as was the objective of SCM.

Further, during joint physical inspection conducted (23 November 2023) by audit with the representatives of PWD, it was noticed that dedicated pedestrian pathways being constructed under the project were asymmetrical *i.e.*, level and width of the pathways varied at different places. Encroachments, trees, electrical equipment, and other obstructions were also observed on the constructed pedestrian pathways.

The Government stated (30 May 2024) that no new land acquisition has been undertaken for the project and all the work carried out within the Right of Way with retrofitting measures. Further, during the Exit Conference (21 June 2024), the Government, while accepting the facts, stated that heavy traffic and space constraints at the selected sites made it impractical to carry out the planned work.

The reply is not acceptable as these issues should have been considered and sorted out at the planning stage.

#### **2.4.5.2 Wasteful expenditure of ₹3.24 crore on Multi Utility Duct**

Audit noticed that post termination (September 2022) of the MoU with Bridge & Roof (India) Limited (B&R) due to extremely slow progress of work, a collective assessment of work done was conducted (April 2023) involving DSCL, B&R, and the Contractor. The assessment disclosed (02 May 2023) that B&R had executed (July 2019 to September 2022) works valuing at ₹ 53.57 crore only (21.51 *per cent*) out of total cost of ₹ 248.99 crore<sup>27</sup> of three projects, that also included unused materials like cable tray, precast MUD, paver block material *etc.*, amounting to ₹ 3.58 crore as detailed in **Appendix-2.5**.

The unused materials were subsequently transferred to PIU-PWD. Among the transferred materials, there were 787 precast MUD units. However, PIU-PWD only utilised 51 units, opting for duct bank alternatives for the remainder due to non-feasibility of the pre-cast MUD. Consequently, a wasteful expenditure of ₹ 3.24 crore was incurred on 736 MUD units as detailed in **Appendix-2.5**.

<sup>27</sup> Smart Road; ₹ 203.23 crore; Integrated Sewerage work; ₹ 28.41 crore and Integrated Drainage; ₹ 17.35 crore.

The Government, while accepting the audit observation, stated (30 May 2024) that the presence of underground utilities of different departments along the routes of the Smart Road posed challenges for installing the MUD. Therefore, the duct bank work was undertaken after obtaining approval of the appropriate authority. Further, during the Exit Conference (21 June 2024), the Government also stated that all territorial divisions of PWD within the district have been informed that they can obtain pre-cast MUD units from PIU-PWD, if needed.

The Government's response is not acceptable, as the issues related to the presence of underground utilities of various departments along the Smart Road routes should have been addressed during the planning stage. Accordingly, provisions for the duct bank should have been included in the DPR.

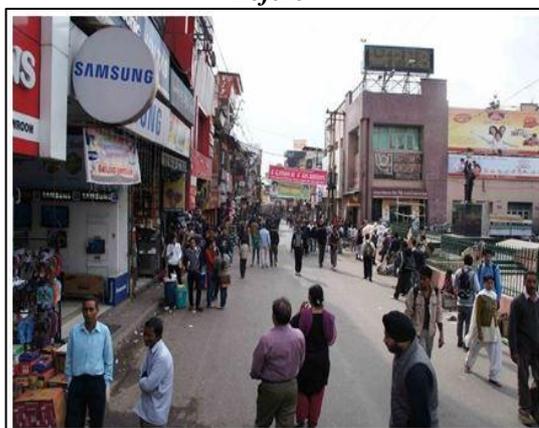
#### **2.4.6 Pedestrianization of Paltan Bazaar**

Paltan Bazaar is the oldest and most famous market place of Dehradun. The Pedestrianisation of Paltan Bazaar project, with a sanctioned (July 2019) cost of ₹ 13.10 crore, aimed at enhancing a 1.2 km stretch from Clock Tower (*Ghanta Ghar*) to Darshani Gate. Within this, 476 meters were designated for development as a pedestrian walkway with a road section of 2.5-meter pedestrian on both the sides and five-meter central spine for golf cart and limited time vehicular movement. The central five-meter carriageway is designed for restricted vehicular movement, with interlocked paver block surface. The footpath of average 2.5-meter width on both the sides maintains the same level with the road surface.

To achieve the objective of the project, many 'Smart features' such as benches, E-cart with charging station, modular FRP toilets, installation of retractable hydraulic bollards to restrict the entry of motor vehicles *etc.* were envisaged (June 2019) in the DPR as detailed in *Appendix-2.1*.

It was observed that none of the 'Smart Solution' were executed except installation of MUD. It was also observed that other 'Smart Solutions' *viz.* e-cart, kiosk garden, hydraulic bollards *etc.*, were de-scoped on the approval (April 2022) of the Board of DSCL as the feasibility of these items ceased to exist in the current situation due to non-availability of space. Thus, due to de-scoping of 'Smart Solutions' from the scope of work, the objectives of Smart Cities as envisaged under the SCM were defeated as focus was shifted to infrastructure work as can be seen in *Pictures-2.6* (Before) and *2.7* (After) below:

*Before*



**Picture: 2.6**

*After*



**Picture: 2.7**

The Government accepted the audit observation and stated (30 May 2024) that the decision to prioritise core civil infrastructure over Smart Features was made in response to site conditions and space constraints, with specific approval of the Board.

### 2.4.7 Rejuvenation of Parade Ground

The Parade Ground has an approximate area of 25 acres, out of which, area of 10.5 acres was to be developed under SCM with the sanctioned (16 July 2019) cost of ₹ 20.87 crore. The core objective of the project was to transform fragmented spaces into a pedestrian and dynamic transformational zone. The work was scheduled to be completed by 30 October 2020. Till the date of audit (October 2023), the work was under progress with an expenditure of ₹ 14.95 crore<sup>28</sup>. The shortcomings noticed in execution of the said project are discussed in the succeeding paragraphs.

#### 2.4.7.1 Lack of proper maintenance

The expenditure of ₹ 14.95 crore incurred on the rejuvenation of Parade Ground also included an amount of ₹ 18.04 lakh on providing and fixing of MDPE pipes for gardening and sprinkler. It was observed that the grass laid on the Parade Ground during project execution was damaged. This also found place in print media (15 February 2024). This indicates that the grass laid on the Parade Ground was not being maintained properly.

The Government stated (30 May 2024) that presently, the Parade Ground is in good condition, and efforts are underway to ensure proper Operations & Maintenance (O&M) to maintain its upkeep effectively. Further, during the Exit Conference (21 June 2024), the Government stated that the project would be handed over to the MDDA for operation and maintenance. The fact remains that the project was not handed over to the MDDA as of June 2024.



<sup>28</sup> ₹ 14.95 crore = ₹ 11.40 crore (work by the contractor before termination of the agreement in February 2023) + ₹ 3.08 crore (cost of work done by PIU-PWD till November 2023) + ₹ 0.47 crore (cost of road work done before PM visit).

#### **2.4.7.2 Wasteful expenditure on construction of a VIP Stage**

The DPR of the project 'Rejuvenation of Parade Ground' costing ₹ 20.87 crore also incorporated the construction of a VIP stage for Republic Day events and for dignitaries addressing large rallies or gatherings.

Audit noticed that the construction work of the VIP stage was completed (February 2021) at a cost of ₹ 31.30 lakh by the contractor as envisaged in the DPR. However, a new VIP stage was later constructed (25 July 2023) at the cost of ₹ 84.11 lakh. This new VIP stage was opposite to the stage constructed earlier, as can be seen in the **Picture-2.8** below, as the previous stage did not give a macro view of the overall parade, and various senior administrative officials of GoU had expressed their dissatisfaction while receiving the Guard of Honor.



**Picture-2.8: View of two VIP stages constructed in the Parade Ground**

The Government replied (30 May 2024) that the construction of new stage was deemed necessary after it was observed that the original stage did not adequately meet the requirements for hosting dignitaries and addressing large gatherings, especially during significant events such as Republic Day. Further, during the Exit Conference (21 June 2024), the Government also stated that the smaller stage is used for small functions, while the larger stage is utilised for significant events such as Republic Day, Independence Day and Dussehra celebrations.

The Government's reply indicates a lack of foresight in designing the first stage to meet the requirements for large-scale events. Efficient planning should have anticipated the need for a stage capable of serving both small and major functions. The construction of a second stage appears to be a corrective measure for an oversight in the initial planning, leading to avoidable duplication of infrastructure and inefficient use of public funds.

#### **2.4.8 City Investments to Innovate, Integrate and Sustain**

DSCCL submitted the proposal titled 'Child Friendly City' for the City Investments to Innovate, Integrate and Sustain (CITTIS) challenge organised by the MoHUA, GoI, and Agence Francaise de Development (AFD), also known as the French Development Agency, with an aim to foster sustainable, innovative, and participatory approaches to build projects within the SCM. Through a competitive challenge, MoHUA selected 12 proposals across four broad themes: sustainable mobility, public open spaces, e-Governance and ICT and social and organisational innovation for low-income settlements.

Initially, the project was not part of the revised SCP. However, Dehradun was selected (February 2019) for implementation of CITIIS project through an All-India Challenge among the selected Smart Cities. The project proposed to refocus towards specific interventions around schools. It included interventions regarding traffic calming measures<sup>29</sup> and facilities like CCTV camera, parking zone, bollards and foot paths. A total of 106 schools<sup>30</sup> and colleges in Dehradun city were included in the program in two phases, with a total sanctioned cost of ₹ 58.50 crore. The status of Smart Features under the project is detailed in *Appendix-2.1*.

During the joint physical inspection conducted (23 November 2023) by audit with the representatives of PWD, it was found that the work was under progress. However, following deficiencies were noticed in the ongoing works:

- Footpaths were not obstacle-free, as they contained electric equipment installed along them, which posed a potential hazard to the pedestrians.
- Instead of construction of footpaths on the roads, only bituminous work was carried out at some places (as shown in first *Picture-2.9*).
- As per norms, the minimum width of the pedestrian path should have been 1.8 meters. During joint physical inspection (23 November 2023), it was found that the width of the constructed footpaths on many roads was less than 1.5 meters, despite that, the minimum width in the drawing was kept at 1.5 meters (as shown in second *Picture-2.10*).



Picture-2.9



Picture-2.10

The Government acknowledged the facts and explained (30 May 2024) that due to site conditions and non-availability of space, the proposed features could not be implemented.

#### 2.4.9 Smart Toilet

To meet the sanitation and cleanliness requirement at public places in Dehradun, DSCL took up Smart Public toilet project with a total sanctioned (November 2018) project cost of ₹ 1.73 crore. The construction of the toilets was to be completed by 06 September 2019.

<sup>29</sup> Installation of the speed tables/humps and rumble strips.

<sup>30</sup> Phase-1: 34 and Phase-2: 72.

Scrutiny of the records revealed that DSCL entered (07 March 2019) into an agreement with a firm<sup>31</sup> for Design, Construction and Installation of seven Smart Toilets including O&M for five years at a cost of ₹ 1.81 crore from the date of completion of project *i.e.*, 06 September 2019.

As per the DPR, DSCL's PMC team conducted thorough site reconnaissance following the detailed analysis and engaging with the local public to finalise scope, design, and selected seven locations<sup>32</sup>. However, the construction/installation work of all the smart toilets was finally completed on 03 September 2022 after a lapse of three years. The inordinate delay was attributed to DSCL, as it could not provide an encumbrance free site for four smart toilets to the contractor till the scheduled date of the completion and subsequent changes in location, and delay in obtaining NOC of the four alternative sites<sup>33</sup>. Further, Smart Features as envisaged in the DPR/Contract were not fully executed as detailed in *Appendix-2.1*.

Audit conducted (25 November 2023) joint physical inspection with the representative of DSCL in respect of five toilets and observed that all the toilets were in operation with proper cleanliness and availability of staff. However, auto flushes urinal system was not functioning in three<sup>34</sup> smart toilets and water tap sensors were also not working in two<sup>35</sup> smart toilets.

The Government accepted (30 May 2024) the audit observation. It also stated that maintenance issues related to tap or flushing systems are addressed on regular basis. Presently, all units are clean and working properly.

#### **2.4.10 Water Supply Augmentation and Smart Water Metering**

To prevent misutilisation of water in absence of metered connections, a project “Water supply augmentation and supply, installation, commissioning of Smart Water Meters” was taken up (16 December 2019) in Zone-4b of water supply area under SCM at the contract cost of ₹ 36.40 crore. Under the project, Automatic Meter Reading (AMR) enabled water meters were to be installed to facilitate quick & accurate collection of consumer’s consumption data and generation of bills without manual interference & errors. The objective was to not only boost Jal Sansthan’s revenue but also to reduce water misutilisation.

The work on this project was scheduled to be completed by 16 December 2020, however, the work was under progress and an expenditure of ₹ 29.54 crore was incurred till the date of audit (October 2023). Against the provision of 6492 AMR meters, only 4,260 AMR meters were commissioned but their digital mapping was yet to be completed (March 2024). This indicates that 2,232 AMR meters were not installed even after a lapse of three years from the scheduled date of completion. Audit carried out

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<sup>31</sup> M/s Shri Ram Institute of Rural Development, Shahdara, Delhi.

<sup>32</sup> Parade Ground, Inside Gandhi Park Rajpur road, Collectorate, MDDA Colony Kanwali Road, Doon hospital, Railway Station and Sachivalaya.

<sup>33</sup> Sabji Mandi (09 July 2020), ISBT (January 2021), Old Tahsil (03 August 2021) and Parade Ground-2 (05 February 2022).

<sup>34</sup> Doon Hospital, Tahseel and Ketchuery.

<sup>35</sup> Parade Ground-2 and Doon Hospital.

(15 March 2024) a joint physical inspection with the representative of DSCL, of a few selected households and interacted with the residents wherein it was conveyed that the project had fulfilled their long-awaited demand for a regular water supply. So far, they have not received water bills from the concerned authority based on the newly installed Smart Meter.

The Government stated (30 May 2024) that the metered billing would commence after the proper handover of the project to Uttarakhand Jal Sansthan (UJS) which is the nodal agency for water distribution and collection of revenue. The fact remains that while about one third AMR meters were still pending for installation, even those installed were not digitally mapped leading to non-billing and realisation of water charges timely.

## 2.5 Case studies

Case studies related to two projects are discussed below:

### Case Study-1: Non-functional ‘Smart Solutions’ in Smart Schools

DSCL implemented ‘Smart School Project’ in three government schools<sup>36</sup> within the ABD zone of Dehradun. Under this project, three schools were to be equipped with smart facilities like interactive boards, computer lab, projectors, e-content, CCTVs, Biometric attendance. The project was completed on 01 November 2020 at the cost of ₹ 5.91 crore.

Audit noticed that none of the facilities installed in the three schools under the SCM were operational at the time of joint physical inspection conducted (12 December 2023) with the representative of DSCL. The primary reason for their non-functionality was the inability of the schools to afford huge electricity bills, due to financial constraints. Throughout the O&M period *i.e.*, November 2020 to November 2023, DSCL paid the electricity charges; however, upon the conclusion of this period, no arrangements were made to ensure the continuity of operations of the installed facilities.

During the Exit Conference (21 June 2024), the Government stated that the process of transferring the Smart School Project to the Education Department was under way. The fact remains that the project was not handed over to the Education Department after the expiry of the O&M period due to which, the installed facilities remained unoperational as of June 2024.

### Case Study 2: Non-functional Smart Waste Vehicles

A provision of ₹ 13 crore was incorporated in the revised SCP for Smart Bins and Smart Waste Vehicle (SWV). Accordingly, NND submitted<sup>37</sup> its request to DSCL for providing SWV and Smart Bins to be used for collection of door-to-door waste, stating that the above vehicles/equipment may be either procured by DSCL or funds to be provided to NND.

<sup>36</sup> Government Girls Inter College, Rajpur road; Government Inter College, Khurbura and Government Girls Junior High School, Khurbura, Dehradun.

<sup>37</sup> October 2021 (20 e-Rickshaw and 20 Hooper/Tipper) and October 2022 (75 Hooper/Tipper, four Refuse Compactor, one Tata 407 Truck, one JCB and 50 Compactor bins).

Accordingly, DSCL procured and supplied (June 2022) 51 SWVs and sanitation equipment, costing ₹ 5.60 crore to NND and also provided ₹ 7.14 crore<sup>38</sup> to NND for procurement of another 100 SWVs. Similarly, DSCL also supplied (May 2021) one Sewer cum Jetting Machine costing ₹ 63.98 lakh to UJS. Besides, it also released (March 2023) ₹ 1.98 crore to UJS for procurement of two machines<sup>39</sup>.

Audit observed that out of 51 SWVs supplied by DSCL to NND, 20 were electric cart/rickshaw, costing ₹ 89.86 lakh. During joint physical inspection conducted (30 November 2023) by audit with the representative of NND, it was found that all e-carts were lying idle. The agencies hired by NND for door-to-door waste collection, informed that the e-rickshaws had been out of operation since September 2022 due to high battery charging costs and the low capacity of the bins.



**Picture-2.11: Parking of M/s Econ Waste Management Solution Pvt. Ltd. at Sahastradhara Road behind Hotel Down Town**

During the Exit Conference (21 June 2024), the Government accepted the audit observation, stating that DSCL is coordinating with NND to ensure operationalisation of e-rickshaws.

The fact remains that the action was being initiated by the Management only after the issue was flagged by audit. Further, the non-operation of e-rickshaws for almost two years reflects the slackness of consistent and proactive management of DSCL as well as NND to manage assets worth ₹ 89.86 lakh created under the SCM.

## **2.6 Review of sustainability of projects**

Self-sustained projects are not reliant on external funding or support, giving them the freedom to operate according to their own needs and goals. By securing their own funding or generating income, these projects ensure that they can continue operating without depending on outside donations or grants. Since they manage their own resources, stakeholders are often more interested in the project's success and take greater responsibility for its outcomes. The matter related to the sustainability of the project is discussed below:

<sup>38</sup> ₹ 7.14 crore = ₹ 4.60 crore (January 2023) + ₹ 2.54 crore (May 2023).

<sup>39</sup> Jetting Garbing and Rodding Machine and Super Sucker Machine with dump tank.

### 2.6.1 Revenue generating projects

Paragraph 10.1 of the SCM guidelines provides that the States shall ensure that a dedicated and substantial revenue stream is made available to the SPV to make it self-sustainable and evolve its own creditworthiness for raising additional resources from the market.

Audit found that, out of 22 projects, only four were revenue generating. The details of their revenue realisation are given in **Table-2.4** below:

**Table-2.4: Details of revenue realised up to March 2023**

(₹ in crore)				
Sl. No.	Name of project	Revenue calculation period from	Revenue to be realised	Actual Revenue realised
1	Electric Bus	February 2021	29.62	3.36
2	Smart Poles	December 2020	1.46	0.32
3	Water ATM	September 2021	0.12	0.09
4	Smart Water Management (SCADA) <sup>40</sup>	Scheduled date of completion (September 2021)	5.30	0.00
<b>Total</b>			<b>36.50</b>	<b>3.77</b>

However, the revenue being realised (10.32 *per cent*) was very less in comparison to the revenue of ₹ 36.50 crore projected in the contract documents, especially in case of e-bus as discussed in the preceding **Paragraph 2.4.4**. The reasons for lesser revenue generation were attributed to extremely low occupancy in e-buses, unavailability of required sites for the installation of Smart Poles and Water ATM and delay in implementation of SCADA project.

While accepting the audit observation, the Government stated (30 May 2024) that new revenue generation opportunities would be explored, besides enhancing operational efficiency and fostering partnership to ensure the long-term sustainability of Smart City initiatives in Dehradun.

## 2.7 Good practices

Good practices were observed under the following projects:

### 2.7.1 Smart Water Management

To cater the issue related to water loss, erratic distribution of water from storage reservoirs and inefficient electric motors, pumping machinery and other equipment, the project “Smart Water Management (SCADA)” costing ₹ 53.40 crore was sanctioned (16 July 2019) under SCM. Under the project, the automation of Tube Wells (TWs), Overhead Tanks (OHTs) and Booster Pumping Stations (BPS) connected to SCADA<sup>41</sup> was intended to optimise the water supply in Dehradun. The plan involved full automation of 198 TWs and 72 OHTs, which would facilitate quantitative and qualitative monitoring, all integrated with SCADA for the efficient management.

<sup>40</sup> Anticipated saving under the Project Smart Water Management.

<sup>41</sup> Supervisory Control and Data Acquisition.

According to the tripartite agreement (September 2020) among DSCL, contractor<sup>42</sup> and UJS, the contractor was obligated to achieve a mandatory 10 *per cent* of compulsory saving in present energy consumption cost on all TWs and BPS, which was to be determined as per the baseline data and also to be shared with DSCL and 25 *per cent* of any additional saving in energy consumption cost which would be achieved over the above mentioned 10 *per cent* compulsory saving.

Audit observed that DSCL opted for the ESCO model<sup>43</sup> for implementing the project and signed the above tripartite agreement valued at ₹ 25.07 crore, which also included Operation & Maintenance for 10 years. Under this agreement, the contractor covered the cost of the energy-efficient pumping electrical machinery. Consequently, DSCL saved ₹ 28.33 crore<sup>44</sup> on the project cost.

Further, it was observed that the project became operational (May 2023) after a delay of 19 months from the scheduled time, *i.e.* 17 September 2021 and from then until December 2023, DSCL effected savings of ₹ 11.97 crore<sup>45</sup> through lower consumption of energy. According to the contract, this amount was to be shared<sup>46</sup> between DSCL (₹ 5.96 crore) and contractor (₹ 6.01 crore). However, the funds against the above savings were yet to be released by the GoU.

## **2.7.2 Doon Integrated Command and Control Centre**

Certain positive outcomes and good practices noticed in DICCC project are as below:

1. **Traffic Management:** ITMS was operational from 09 November 2020. Traffic police issued 1,73,618 traffic challans during 2020-21 to November 2023 against violations detected using ITMS application and collected revenue of ₹ 5.05 crore.
2. **Public safety & security incidents:** Based on footage of surveillance cameras installed throughout the city, DICCC provided 748 leads to the Police Department, which helped the police to ensure public safety. Few resolved cases include finding out a missing child based on leads provided by DICCC team, real time reporting of accident caught on camera leading to arrival of ambulance and police on accident site.
3. **Assistance to city administration:** DICCC helped city administration during dengue outbreak (September-October 2023) in the city ensuring timely availability of blood and platelets to the patients. A dedicated helpdesk with a toll-free helpline number was also set-up for dengue control.

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<sup>42</sup> M/s GCKC Project & Work Pvt. Ltd.

<sup>43</sup> In Energy Saved sharing model (ESCO), contractor is responsible for all the activities and has to quote price of service, considering the 'Compulsory Saving', and over and above this the 'Additional Expected Saving' in the energy bill.

<sup>44</sup> Sanctioned cost ₹ 53.40 crore – Contract value ₹ 25.07 crore.

<sup>45</sup> ₹ 11.97 crore = ₹ 39.62 crore (Electricity bill if Smart Water Management project not implemented) - ₹ 27.65 crore (Electricity bill after implementation of Smart Water Management project).

<sup>46</sup> DSCL share was 10 *per cent* of ₹ 39.62 crore (electricity bill if Smart Water Management project not implemented) *i.e.* ₹ 3.96 crore, and 25 *per cent* of remaining savings of ₹ 8.01 crore (₹ 11.97 crore - ₹ 3.96 crore) *i.e.* ₹ 2.0 crore. Contractor share was ₹ 6.01 crore (₹ 11.97 crore – DSCL share ₹ 5.96 crore).

4. ***Award for good works:*** During COVID-19 pandemic, a war room was set-up in DICCC, through which, various citizen centric services such as GIS tracker, 24x7 dedicated helpline, state level e-pass *etc.* were provided to assist police and citizens. For this, DSCL bagged an award at EXPO-6 Smart City India Award-2021 among 100 smart cities.

## **2.8 Recommendations**

1. ***The State Government should address operational shortcomings and ensure the functioning of non-operational infrastructure developed under the Smart Cities Mission.***
2. ***The State Government should adopt strategies to increase revenue and ensure the sustainable operation of infrastructure developed under the Smart Cities Mission to minimise the gap between actual and projected revenue.***
3. ***Responsibility should be fixed for unplanned and inefficient use of public funds leading to duplication and infructuous expenditure.***



**Chapter-3**  
**Contract Management**



*Dehradun Smart City Limited (DSCL) faced several issues in its contract with the Project Management Consultant (PMC). The payment structure didn't include milestone-based payments, leading to funds being released even when projects were incomplete. The PMC also did not deploy manpower as per the contract, raising concerns about improper payments and financial integrity. There were irregularities such as unverified payments, inadmissible payment, wasteful expenditure, procurement violations and reimbursements made to the PMC without proper documentation, indicating weak oversight and contract enforcement.*

*DSCL also failed to provide a clear, obstruction-free work environment for the implementing agencies, causing significant project delays and leaving advances unadjusted. Besides, DSCL was ineffective in enforcing penalties for delays. The penalties imposed, were either too lenient or not fully enforced, giving undue advantages to the contractors. The Chapter also covers the issues related to cost escalation and execution of work without inviting tenders.*

### 3.1 Project Management Consultant

As per Para 10.6 of the SCM Guidelines, the SPV may appoint Project Management Consultants (PMC) for end-to-end services. Accordingly, DSCL initially engaged (June 2018) a PMC at the contracted value of ₹ 17.62 crore for planning, designing, developing, managing, implementing, and monitoring of the projects costing ₹ 1200 crore to be implemented under the SCM for a period of three years<sup>1</sup>. In the interregnum, DSCL also allocated (September 2019) the CITIIS project work to the PMC at a cost of ₹ 2.74 crore. Further, due to completion of tenure of this PMC, DSCL had to engage (September 2021) another PMC for an additional two years<sup>2</sup> to complete the remaining work.

Audit found the following deficiencies in utilisation of services and payment made to the first PMC:

#### 3.1.1 Faulty Payment Model

The contract outlined two distinct payment components: Time-based and Lump sum. Each component was further sub divided into two sub-components: remuneration and reimbursement, with specific payment criteria for both as detailed below:

- **Time-based components:** This component consisted of two sub-components remuneration and reimbursement. Payment of the remuneration was based on

<sup>1</sup> 15 June 2018 to 14 June 2021 (extended up to 15 August 2021).

<sup>2</sup> 15 September 2021 to 14 September 2023 (extended up to 15 November 2023).

the actual deployment of man-days, as per the approved time sheets by DSCL, in accordance with the professional fees as per contract whereas the reimbursable expenses<sup>3</sup> were to be paid based on an actual basis.

- **Lump sum component:** This component also consisted of two sub-component, remuneration and reimbursement. However, the payment was to be made on a *pro-rata* basis, contingent upon the achievement of specified deliverables<sup>4</sup>.

Audit observed that upon completion of the tenure of the first PMC, DSCL disbursed the full contractual amount *e.g.*, ₹ 17.62 crore to it, while only four projects<sup>5</sup> costing ₹ 18.79 crore were completed till August 2021. The progress of 15 projects ranged from 7 to 92 *per cent* and the remaining two<sup>6</sup> projects had not commenced till June 2021.

For execution and supervision of ongoing/remaining projects, DSCL engaged a new PMC (September 2021) at cost of ₹ 14.35 crore (excluding GST) for the next two years<sup>7</sup>. Audit observed that DSCL failed to learn from the previous experiences, neglecting to tie payment to the progress of work, opting instead for the previous payment model. As a result, an amount of ₹ 11.20 crore was disbursed to this PMC by June 2023, with a remaining claim of ₹ 1.33 crore pending for the subsequent period. Satisfactory progress in the execution of projects could not be achieved till the end of the contract period (September 2023). Out of 18 projects (including CITIIS), 12 projects costing ₹ 463.58 crore were completed and six<sup>8</sup> costing ₹ 498.18 crore (50 *per cent* of SCP) were still in progress which ranged from two *per cent* to 75 *per cent*. This indicated that the payment model was not linked to the milestone and works valuing ₹ 498.18 crore were being executed without PMC despite total contract payment of ₹ 28.82 crore<sup>9</sup> made to them for a period of five years.

During the Exit Conference (21 June 2024), the Government acknowledged the concerns and explained that, based on the prevailing practice, the contract was structured on a Remuneration & Reimbursement basis. The Chief Executive Officer (CEO) further added that the progress of the projects was impacted by various challenges including complexities of coordinating with multiple line departments, execution of work in brownfield area, site issues and contract issues. Further, the CEO assured that, in future contracts, the supervision component of the contract will be linked to progress of the project.

The reply is not acceptable as the mentioned challenges should have been anticipated and addressed during the planning phase. Effective contract management should include provisions for mitigating such challenges rather than attributing them as

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<sup>3</sup> All assignment-related costs such as travel, translation, report printing, secretarial expenses, subject to the specified maximum limits in the Contract.

<sup>4</sup> Submission of situation analysis report for sub-modules, feasibility study report, detailed project report and bid documents and its acceptance & approval by the DSCL.

<sup>5</sup> Smart Toilet: ₹ 1.81 crore; Smart Waste Vehicle: ₹ 16.32 crore; Monumental Flag: ₹ 0.10 crore and Digitization of Collectorate and CDO office: ₹ 0.56 crore.

<sup>6</sup> Green Building & Façade Projects.

<sup>7</sup> 15 September 2021 to 14 September 2023 (*extended up to 15 November 2023*).

<sup>8</sup> Green Building, Smart Road, Sewerage work, Drainage work, CITIIS and Smart Pole in PPP Mode.

<sup>9</sup> ₹ 28.82 crore = ₹ 17.62 crore + ₹ 11.20 crore.

unforeseeable or citing these as reasons for delays. Further, the fact remains that the payment model was faulty as it was not linked with the milestones of the projects.

### **3.1.2 Irregularities in payments to the first PMC**

Audit noticed the following instances of mismanagement related to deployment of manpower by the first PMC:

#### **3.1.2.1 Irregular Payment**

According to the contract with the PMC, the deployment of manpower for Project Implementation & Supervision support was scheduled to commence after the selection of the implementing agency for the first project (February 2019). However, audit noticed that the PMC claimed remuneration of ₹ 1.27 crore for this activity from the onset of the contract in June 2018 up to February 2019. Consequently, payment made to the PMC for deployment of manpower prior to selection of Implementing Agency (IA) was in violation of the contract provisions and it also contravened financial propriety standards.

During the Exit Conference (21 June 2024), it was replied that the contract included a staffing schedule designed for the entire 36-month tenure, indicating the engagement of PMC from the commencement of the contract. Accordingly, manpower was deployed and payments were made.

The reply is not acceptable because the staffing schedule mentioned in the contract clearly stated that the deployment of manpower for Project Implementation & Supervision support was to commence only after the selection of the IA of the first project.

#### **3.1.2.2 Deployment of ineligible IT Expert**

Clause-3.6 and 4.3 of the contract provided that the PMC shall obtain the employer's prior approval before making any change or addition to the personnel listed in the contract. It also specified that the IT expert must hold B.Tech. qualification in Information Technology/Computer Science and a minimum experience of 12 years in GoI/ State Government/ PSU with respect to e-Governance, IT based Smart Solutions, Business Process Re-engineering projects with at least two works of more than ₹ 20 crore each.

Audit observed that for replacement of existing IT Expert, the Curriculum Vitae (CV) of an IT Expert was submitted (25 October 2018) for approval of the CEO, but the same was rejected (14 November 2018) on the grounds that the qualification and the experience of the said IT expert were not as per the provisions of the contract. However, upon submission (12 December 2018) of a representation by the PMC, DSCL later accorded (May 2019) *post-facto* approval for deployment of the same IT Expert, using the same documents and records that had previously led to the rejection, and made payment of ₹ 35.84 lakh (excluding GST) to the PMC against the remuneration for nine months<sup>10</sup>.

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<sup>10</sup> 15 October 2018 to 15 July 2019.

The Government replied (30 May 2024) that the engagement of the IT expert was approved by CEO, DSCL, the competent authority of the Smart City, after due consideration of the submitted CV.

The reply is not acceptable as the then CEO also expressed (March 2019) dissatisfaction with the IT expert's performance citing an unsatisfactory Reference for Proposal proposed for the IT project, which contributed to project delays. The payment made to PMC as remuneration for the IT expert was, therefore, unjustified.

### **3.1.2.3 Unverified Payment**

Following instances of unverified payment were observed during audit:

1. Scrutiny of records revealed that DSCL disbursed payment of ₹ 32.50 lakh to the PMC against a supplementary bill for the month of March 2021. The supplementary bill was associated with the remuneration claim of eleven 'Key Experts and Support Staff' for the period from November 2020 to March 2021. It was observed that the payment of supplementary claim was not justified as the concerned personnel were not present as per the attendance records during the specified claim made earlier in the respective months. However, these personnel were shown to be present later in the respective months as per the above supplementary claim. Further, CEO, DSCL had also observed (December 2020) that many of the key personnel were not being mobilised by PMC since long. Notably, there was no record or note on file explaining the rationale behind the payment of the supplementary bill.
2. Further, scrutiny of voucher for the month of August 2018 revealed that remuneration of ₹ 1.50 lakh was paid to an Environment Expert, whereas the said Expert was not present during that month as per the attendance records.

Thus, the claims made by the PMC was not scrutinised with due diligence by the concerned authorities of DSCL. Consequently, payment of ₹ 34.00 lakh to the PMC was made on the basis of unverified claim.

The Government stated (30 May 2024) that in the supplementary bill for March 2021 disbursement were made to 11 key experts and support staff on the approval of the Board (26 June 2021). The attendance records of these personnel were not documented in the register for the months following the expiration of the man-month. In respect of payment to the Environment Expert, DSCL accepted that the presence was not documented in the manual register, however, payment was allowed based on computerised records.

The reply is not acceptable, as payments were released without verification of actual presence and no documentary evidence was furnished to Audit to establish the genuineness of the claim. Audit observed that the man-days of eight out of the 11 key experts/support staff were still available and had not been exhausted. Hence, the contention that attendance was not recorded due to expiry of man-month is factually incorrect. Additionally, if the man-days had actually been exhausted, the attendance of the above staff should not have been recorded in April and May 2021; however, entries were found in the manual attendance register. Further, continuance of remaining three staff should have been based on prior approval, as required in the contract.

### 3.1.2.4 Inadmissible Payment

The DSCL handed over (July 2019 to October 2019) three projects<sup>11</sup> costing ₹ 407.33 crore to other IAs<sup>12</sup> for execution. Audit observed that the DSCL had made an inadmissible payment of ₹ 28.82 lakh<sup>13</sup> to the PMC for bid process management<sup>14</sup> though the same was carried out by the concerned IAs themselves. It was also observed that the above claim made in the bill of December 2019 was earlier withheld on the same ground, but later, it was re-submitted in the bill of January 2020, which was released (February 2020) by DSCL.

During Exit Conference (21 June 2024), it was replied that IAs followed their own departmental processes for contract management. However, the PMC provided extended support to the IAs by supplying the Bill of Quantities (BoQ) and offered assistance as needed. Throughout the project execution phase, the PMC also provided overarching supervision and monitoring.

The reply is not acceptable as the payment to PMC was admissible for complete bid process management from bid invitation to bid evaluation and selection of the contractor. Since the IAs followed their own departmental processes for contract management, no payment was admissible for bid process management. Besides, separate payments were made to the PMC for DPR including BoQ, supervision, and monitoring tasks.

### 3.1.2.5 Reimbursement without invoice and documents

According to Rule 3 (13) (3) of Uttarakhand Procurement Rules 2017, the standards of financial propriety stipulate that every government servant shall exercise the same vigilance in respect of expenditure incurred from public money as a person of ordinary prudence would exercise in respect of the expenditure of his own money. Further, as per the provision of the contract, the reimbursement should be on actual basis.

Scrutiny of records revealed that there was a provision of ₹ 48 lakh<sup>15</sup> in the contract with PMC for reimbursable expenses towards local transport. Further, it was also provided in the contract that the copy of the Registration Certificate (RC) of the hired vehicle and the logbook containing journey details for reimbursable expenses for local transport shall be submitted by the PMC. Audit scrutiny revealed that DSCL had reimbursed the claim of ₹ 45.60 lakh<sup>16</sup> to the PMC for 76 vehicle months during the period June 2018 to August 2021 without any invoice of actual expenditure incurred by PMC. Scrutiny of the vouchers related to payment of ₹ 45.60 lakh also revealed the following irregularities:

- a. ₹ 7.80 lakh was paid by DSCL for 13 vehicle months without copy of RC of the hired vehicle, and of the logbook containing journey details.

<sup>11</sup> Smart Road (₹ 190.54 crore in July 2019), Green Building (₹ 204.46 crore in October 2019) and Modern Doon Library (₹ 12.33 crore in September 2019).

<sup>12</sup> Implementing Agencies for project Smart Road, Green Building and Modern Doon Library were M/s B& R (India) Limited, CPWD and UJN respectively.

<sup>13</sup> ₹ 28.82 lakh = ₹ 407.33 crore/₹ 1200 crore x ₹ 2.056 crore x 35 per cent + GST @ 18 per cent.

<sup>14</sup> Preparation of Bid documents and award of contract.

<sup>15</sup> ₹ 60,000 per month (excluding GST) for 80 months.

<sup>16</sup> At maximum rate of ₹ 60,000/month/vehicle for 76 months.

- b. Payment for the claim of an amount of ₹ 4.20 lakh for the period from July 2018 to January 2019 was made for private vehicles.

It is evident from the above that the claims were not scrutinized with due diligence by the concerned/competent authorities of the DSCL. Consequently, an irregular payment of ₹ 45.60 lakh was made to PMC.

During Exit Conference (21 June 2024), while accepting the audit contention, it was stated that DSCL would seek clarification from the consultant, if the consultant failed to provide a satisfactory justification, the amount would be recovered from the consultant.

### **3.1.2.6 Irregularities in CITIIS project**

The City Investments to Innovate, Integrate and Sustain (CITIIS) project was introduced at a later stage (February 2019) under SCM. DSCL allocated (September 2019) the work of DPR preparation and supervision for CITIIS project to the PMC at a cost of ₹ 2.74 crore through an amendment to the initial contract, despite the fact that the work of DPR for the Gandhi Road containing the same component was already prepared by this PMC. Following financial irregularities were noticed under the project:

#### **a) Undue benefit to the PMC**

Audit scrutiny showed that even though DSCL issued several letters and termination notice (June 2019) to the PMC due to its unsatisfactory performance, the work of DPR preparation and supervision for CITIIS project was entrusted (September 2019) to the same PMC without adhering to the tendering process<sup>17</sup> outlined in the Uttarakhand Procurement Rules, 2017. DSCL exclusively solicited a proposal from the same PMC and awarded the work through a contract amendment. On comparing the costs of DPR preparation and supervision for the CITIIS project with those of earlier projects of SCM, it was observed that the work was awarded to the PMC at significantly higher rates (*3 to 12 times higher*) than the rates quoted under the original contract, as detailed in the **Table-3.1** below:

**Table-3.1:- Comparison of rates of CITIIS project with Smart City projects**

Particulars	Rates under CITIIS project	Rates under original PMC contract
<b>Considering DPR Preparation Cost</b>		
Cost of Project (A)	₹ 58.00 crore	₹ 1,200.00 crore
DPR Preparation Cost (B)	₹ 1.18 crore	₹ 2.056 crore
<i>Average Cost of preparation of DPR costing ₹ one crore. (B/A)</i>	<i>₹ 2.03 lakh</i>	<i>₹ 0.17 lakh</i>
<i>Comparison of average cost of CITIIS project with SCM projects</i>	11.94 times = ₹ 2.03 (average cost of CITIIS)/ ₹ 0.17 (Average cost of SCM)	
<b>Considering Overall Cost</b>		
Cost of Project-(C)	₹ 58.00 crore	₹ 1,200.00 crore
Design, Development, Management and implementation cost- (D)	₹ 2.74 crore	₹ 17.62 crore

<sup>17</sup> Works/services valuing ₹ 50.00 lakh were to be executed through two bid system.

Particulars	Rates under CITIIS project	Rates under original PMC contract
Average Cost of Design, Development, Management and Implementation of work costing ₹ one crore. (D/C)	₹ 4.72 lakh	₹ 1.46 lakh
Comparison of average cost of CITIIS project with SCM projects	3.23 times = ₹ 4.72 lakh (average cost of CITIIS)/ ₹ 1.46 lakh (Average cost of SCM)	

Audit scrutiny also revealed that the DPR prepared by the PMC for the CITIIS project, was approved (November 2021) by the HPSC for ₹ 58.50 crore. Thus, entrustment of CITIIS project to the PMC without adhering to the tendering process was in violation of the Procurement Rules, which also led to undue benefit of ₹ 1.09 crore<sup>18</sup> on account of higher rates.

During the Exit Conference (21 June 2024), the Government replied that, to ensure continuity and efficiency in the project execution, the project was awarded to the same PMC through contract negotiation. Regarding higher rates, it was replied that CITIIS project involved higher level of intricacy and innovation, justifying higher rates for services for DPR preparation and project management.

The reply is not justified as the scope of work under CITIIS project included routine work like MUD, drains and water supply work, traffic calming measures *etc.* which were similar to those executed under Smart Road and other Projects of SCM and did not involve any high level of intricacy and innovation.

#### **b) Wasteful expenditure**

The PMC had prepared (March 2021) the DPR in two parts, one of which pertained to the construction of Gandhi Road, costing at ₹ 39.31 crore and the other part related to child friendly intervention costing ₹ 13.24 crore along with ₹ 5.95 crore for O&M and overhead charges. Audit noticed that Gandhi Road project was dropped (December 2022) due to its alignment overlapping with the proposed metro route. Notably, the alignment issue had already been brought to the notice of the DSCL by Uttarakhand Metro Rail Corporation in December 2018. Despite this, a wasteful expenditure of ₹ 79.80 lakh<sup>19</sup> was incurred in preparation of the DPR.

No specific reply was furnished by the Government.

#### **c) Reimbursement without invoice and documents**

DSCL allocated ₹ 1.18 crore<sup>20</sup> for remuneration and reimbursement expenses in the contract for DPR preparation of the CITIIS project. The contract amendment signed (September 2019) for the CITIIS project lacked a breakdown specifying the activities covered, rate and allocation of months, for the reimbursement component, though there were defined criteria/items for payment against the reimbursement component in the original contract.

<sup>18</sup> ₹ 1.09 crore = [₹ 2.03 - ₹ 0.1712 (as calculated in Table-3.1)] x ₹ 58.50 crore.

<sup>19</sup> ₹ 79.80 lakh = Average Cost of preparation of DPR costing ₹ 1.0 crore *i.e.* ₹ 2.03 lakh x Total cost of DPR *i.e.* ₹ 39.31 crore.

<sup>20</sup> Remuneration: ₹ 82.73 lakh for 24 Man-month (Key Expert: 19 + Non-Key Expert: 5) & Reimbursement ₹ 35.00 lakh.

No documentation was found on records indicating the methodology used to calculate the expenses associated with reimbursement components. Instead, a lump-sum provision of ₹ 35.00 lakh was incorporated in the contract without any payment conditions. Scrutiny of the voucher revealed that the entire payment of ₹ 35.00 lakh (excluding GST) was made (January 2022) to PMC under the reimbursement head without any supporting documents. Thus, lump sum payment of ₹ 35.00 lakh to PMC by the DSCL was without due diligence and hence unjustified.

The Government replied (30 May 2024) that the lump-sum provision was structured to provide flexibility in managing expense associated with the project's unique requirements, ensuring timely progress and quality deliverables. The payment to the PMC was made in accordance with the provision outlined in the contract and with due diligence.

The reply is not acceptable because, similar to the original contract, defined criteria/items should have been part of the contract amendment. Further, reimbursement should have been on actual basis supported by the documentary evidence.

**d) Irregular Payment**

- i) As per Rule 3 (13) (3) of Uttarakhand Procurement Rules, 2017, the standards of financial propriety stipulate that every government servant shall exercise the same vigilance in respect of expenditure incurred from public moneys as a person of ordinary prudence would exercise in respect of the expenditure of his own money.

Audit scrutiny revealed that an amount ₹ 21.80 lakh was reimbursed (June 2021) to the PMC for work (Tactical Urbanism Exercise) carried out under CITIIS programme. Further, scrutiny of the voucher revealed that the invoices, submitted by the PMC in support of the claim did not bear the names of either the PMC or DSCL<sup>21</sup>. Consequently, the above payment made to the PMC was irregular.

The Government replied (30 May 2024) that the work was further assigned by the PMC to other company (Athena Informatics India Ltd) which had sub-contracted the task to yet another company (Big Daddy Co). Accordingly, the payment to the PMC was made after considering the bill raised by these companies to PMC.

The reply is not justified as the bills from the company engaged by the PMC, were submitted (July 2021) to it after DSCL had already made the payment to the PMC (June 2021).

- ii) According to the contract with the second PMC, the deployment of manpower for Project Implementation & Supervision was scheduled to commence after the selection of the implementing agency. PIU-PWD was selected (October 2022) as the implementing agency for the CITIIS project. Hence, payment to the PMC on account of remuneration for deployment of Implementation & Supervision staff under this project should have commenced only after selection of IA.

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<sup>21</sup> Instead, the invoice was issued by the Big Daddy Co. in favour of Athena Informatics India Limited, Vasant Vihar, Dehradun (GSTIN-05AAICA6830B1Z4).

Audit scrutiny revealed that DSCL had disbursed ₹ 65.40 lakh to the second PMC<sup>22</sup> for CITIIS project<sup>23</sup> from September 2021 to September 2022 even before selection of PIU-PWD as IA in October 2022. Thus, the payment of ₹ 65.40 lakh made to the PMC was in violation of the provisions of the contract causing avoidable financial burden to the DSCL to the same extent.

The Government stated (30 May 2024) that deploying staff for preparation of the DPR for CITIIS fell well within the scope of work stipulated in the contract. Although the renovation of Gandhi Road was removed, and 72 new schools were incorporated into the DPR, both tasks were effectively managed by the second PMC.

The reply is not acceptable as the DPR was already prepared by the first PMC. Further, the cost of additional resources deployed in CITIIS DPR preparation for 72 schools, as intimated by the second PMC, amounted to only ₹ 21.80 lakh.

### **3.1.3 Lack of action against the PMC**

Audit scrutiny revealed that the first PMC did not adopt a professional approach towards the work of Smart City from the very beginning. Several projects under DSCL were facing issues of delayed submission of the design and drawings, unavailability of IT expert & support staff for supervision *etc.*, which ultimately resulted in delay in the execution of the projects. It was also noticed that the performance of the PMC in supervision and monitoring of quality of works executed by the contractor was unsatisfactory.

DSCL issued (June 2019) notice of termination, wherein it was stated that ***“the PMC is incompetent for the implementation and the supervision of the project and the quality of the DPR is also not up to the expectation of the DSCL, PMC is submitting the DPR just for the formality”***. Despite this, DSCL did not terminate the contract with the PMC, however, it assigned another work of CITIIS project valuing ₹ 58.50 crore to the same PMC in September 2019.

Audit found that apart from issuing routine warning/show cause notices and termination notice (June 2019 & January 2021) to the PMC, DSCL had neither initiated any action nor had it imposed any penalty on the PMC for delay and bad quality works. Further, it was observed that the issues relating to the unsatisfactory performance and bad quality of work done by the PMC were in notice of the DSCL (September 2018), however, at the verge of completion of the contract period (June 2021), the matter of poor performance of the PMC was brought to the notice of Board (17<sup>th</sup> Board meeting held on 24 March 2021). The Board ordered to take appropriate action and impose penalty as per the conditions of the contract owing to the unsatisfactory performance of the PMC and the CEO was authorized to take appropriate action, which may include termination of the contract. However, no action was initiated against the PMC despite order of the Board.

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<sup>22</sup> M/s TATA Consulting Engineers Limited.

<sup>23</sup> GoU established (October 2022) PIU-PWD as the implementing agency for CITIIS project. A contract for execution of CITIIS works was executed in February 2023 by the PIU-PWD.

The Government stated (30 May 2024) that the PMC's performance was evaluated based on various factors including adherence to the contractual obligations, and appropriate actions were taken as necessary. Besides, no further extension was granted to the PMC due to performance issues. During the Exit Conference (21 June 2024), the Government also added that blacklisting would be initiated against the PMC.

The reply is not acceptable as no action was taken against the PMC as per the contractual provisions and the order of the Board. Moreover, despite poor performance, another work of CITIIS project was awarded to it during the term of the contract.

### **3.2 Arbitrary selection of B&R (CPSU) as an implementing agency**

During a meeting (March 2019) chaired by the Chief Secretary, GoU, it was decided that engaging a Central Public Sector Undertaking (CPSU) would be better to execute the work related to roads, sewer line, drinking water line, drainage, and MUD, as these works had not been comprehensively undertaken by any department of Government of Uttarakhand. Accordingly, DSCL had sought (April 2019) proposals from all the eight CPSUs empanelled as executing agencies in Uttarakhand. In response, five CPSUs showed (May 2019) their interest while one CPSU (NBCC) expressed its regret as detailed in **Table-3.2** below:

**Table-3.2: List of empanelled CPSUs in Uttarakhand**

Sl. No.	Name of the CPSU	Experience
1	National Projects Construction Corporation Limited Under M/o Jal Shakti	Township and Buildings, Public Health Engineering and Environmental Projects, Surface Transport Projects, Dams / Weirs, Barrages, Canals, Industrial Structure, Hydroelectric Projects, Thermal Power Projects, Chimney / Transmission Projects, Project Management Consultancy,
2	Bridge & Roof Company Ltd. Under M/o Heavy Industries	Rich experience of 100 years in the field of construction like Piling and Foundation, Housing projects, Hospital building, Institutional building, Office complex, High rise buildings and Structure, Auditoriums, Airport terminal buildings, Roads and Highways and all other types of civil works in Infrastructure and Industry sector.
3	Engineering Projects (India) Ltd. Under M/o Heavy Industries	EPI has the rare distinction of having worked for almost all Power utilities and Steel Plants both in the Public Sector as well as in the Private Sectors.
4	WAPCOS Ltd. Under M/o Jal Shakti	Engaged in engineering consultancy services and construction in the fields of water, power and infrastructure sectors for businesses and communities in India and overseas.
5	Central Public Works Department Under M/o Housing and Urban Affairs	CPWD had submitted its profile only which does not include the details of similar work experience. Hence, not considered.
6	NBCC Under M/o Housing and Urban Affairs	It had carried out multiple projects in Uttarakhand including Himalayan Cultural Centre, Kaulagarh, Dehradun.

*Source: Official website of the concerned company.*

Audit scrutiny revealed that:

- i. No objective scoring criteria/parameters for the selection among the five CPSUs was proposed by DSCL. Instead, CPSUs were subjectively assessed stating that

“from the technical evaluation, it seems that three empanelled agencies namely WAPCOS, NPCC and B&R having the relevant experience of the smart road in major counts”. Accordingly, out of the above three CPSUs, Bridge & Roof (India) Limited (B&R) was nominated (June 2019) by the Government as the executing agency for the implementation of project – Smart Road. However, no criteria/parameter was found on records for nomination of B&R among the three CPSUs. Further, for “Drainage work” and “Sewerage work” separate nomination was made (November 2019) in favour of B&R in the similar manner.

- ii. Further scrutiny revealed that B&R had no registration under GST in Uttarakhand as on the date of nomination (19 June 2019), whereas the other two CPSUs has already been registered<sup>24</sup> in Uttarakhand at the time of nomination of the B&R as implementing agency. It was observed that B&R got registration under GST in Uttarakhand on 01 January 2021, which indicates that B&R had no working experience in Uttarakhand as of the date of nomination.
- iii. Scrutiny revealed that DSCL signed three MoU with B&R for implementation of three projects as detailed in the **Table-3.3** below:

**Table-3.3: Details of MoU signed with B&R**

(₹ in crore)				
Sl. No.	Name of the Work	Date of MOU	Scheduled date of completion	Amount
1	Construction of <b>Smart Road</b> including multi utility duct, sewerage, drainage and water supply <i>etc.</i>	12 July 2019	01 July 2021	203.23
2	<b>Drainage work</b> (Part-II) connecting drains up to Outfall points including.	10 December 2019	01 December 2020	17.35
3	<b>Sewerage work</b> (Part-II) Main sewer network of ABD area with connectivity up to existing Outfall.	10 December 2019	01 December 2020	30.30

As per the MoU, the work (Smart Road) was scheduled to be completed by, 01 July 2021. However, by the end of the extended time period (April 2022<sup>25</sup>) B&R could complete only 30 *per cent* of the physical work of Smart Road and Sewerage work and the Drainage work could not be commenced. As a result, the MoU with B&R was terminated by the Government in September 2022. Further, for execution of the leftover work, the GoU nominated PWD and established (October 2022) a separate Project Implementing Unit (PIU-PWD) for Smart Road work (₹ 138.06 crore) and assigned (October - November 2022) the Drainage (₹ 9.84 crore) and Sewerage work (₹ 16.00 crore) to Irrigation Department, Uttarakhand and UJN respectively. Audit scrutiny showed that though the works had not been completed by April 2024 even after lapse of seven to nine months from the scheduled date of completion<sup>26</sup>, all the three projects were in an advanced stage<sup>27</sup> of construction.

<sup>24</sup> NPCC: 29 October 2018 and WAPCOS: 07 July 2017.

<sup>25</sup> Extension up to April 2022 was provided on the approval of the Board of DSCL due to COVID-19 pandemic impact.

<sup>26</sup> Smart Road: 16 August 2023; Drainage work: 30 June 2023 and Sewerage work: 01 June 2023.

<sup>27</sup> Smart Road (98 *per cent*); Drainage work (95 *per cent*); and Sewerage work (60 *per cent*).

Thus, the nomination of B&R as implementing agencies was, *prima facie*, unjustified. The said company was specialised in the industrial work and accordingly was under the administrative control of the Ministry of Heavy Industries, GoI. Secondly, there was a dedicated Public Works Department for Road & Bridge works, Irrigation Department for Drainage work and State PSU (UJN) for Sewerage work and Water Supply Works. In fact, the State's own agencies carried out all the works for which they were initially found unsuitable by the senior functionaries of the Government. Besides, the GoU agencies (Uttarakhand Urban Sector Development Agency and Irrigation Department) already had experience in executing sewerage and drainage related works under externally aided projects and State funded projects.

The Government accepted (30 May 2024) the fact and replied that B&R was subjectively assessed as having relevant experience in road projects. Further, no objective scoring criteria was adopted as the decision to nominate B&R was based on technical evaluation indicating their suitability for the project. It was clarified that the process for selection of the executive agency (B&R) adhered to the guidelines and directives set by the GoU.

The reply is not acceptable because the top authorities of the State overlooked the working capabilities of their own esteemed organizations which had extensive experience in the relevant field. Further, the work left unfinished by B&R was being done by the Government agencies of Uttarakhand, which was in the advanced stages of progress<sup>28</sup> as of 30 April 2024. Further, the Guidelines issued by Central Vigilance Commission provides that the award of contacts/procurements/projects on nomination basis without adequate justification amounts to a restrictive practice eliminating competition, fairness and equity.

### **3.2.1 Not providing hindrance-free work front**

The site for the work to be carried out under the MoU with B&R was situated in a brownfield area, specifically in busy commercial hubs, where numerous utilities belonging to various departments were present. Audit observed the following instances of unavailability of hindrance-free work front.

- i) B&R repeatedly informed DSCL through various letters that DSCL had not provided a hindrance free work front and had not submitted drawings and designs on time. In response, DSCL consistently stated that, according to the MoU, B&R was responsible for removing hindrances and providing drawings and designs. Despite this disagreement, neither DSCL nor B&R brought the matter before the Dispute Resolution Committee (DRC) as specified in the MoU.

The Government did not furnish any specific reply, however, the Management stated (December 2023) that, as per the MoU, B&R was responsible for addressing hindrances and handling drawing-related matters. DSCL also attempted to address the hindrance by coordinating with the line departments. Further, it was also stated that B&R had demanded new rates instead of taking the matter to DRC.

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<sup>28</sup> 60 per cent to 98 per cent.

The reply is not acceptable as MoU did not include any specific provisions regarding the responsibility for hindrance removal. Moreover, B&R had consistently raised concerns about hindrance removal and drawing-related matters. Further, while the B&R conveyed (June 2022) the request of the contractor for introduction of a Price Variation Clause, the termination process of the MoU was already underway. During this period, DSCL had also not taken any steps to address the matter with DRC.

- ii) Four roads earmarked for the implementation of the Smart Road project were located in the busy commercial hub of the city, where there were many hindrances in alignment. Despite being aware of the project's complexity and technical challenges, DSCL failed to identify these hindrances during planning stage or devise a concrete plan for shifting the utilities or removing obstacles<sup>29</sup>. B&R submitted a list of overhead hindrances, as detailed in **Appendix-3.1**, to DSCL in December 2019, January 2020, October 2020 and July 2021. DSCL, lacking in ownership of any assets, forwarded these concerns to the respective line departments from time to time. However, the necessary action was not taken by the concerned department. This not only indicates lack of effective planning on the part of DSCL but also shows lack of coordination with the concerned line departments.

Government accepted (30 May 2024) the fact, and replied that identification and mitigation of hindrances, particularly in busy commercial hubs, are crucial for the successful implementation of infrastructure projects like Smart Road. It further added that certain challenges were encountered in addressing hindrances related to utilities, hoardings, poles, trees and other obstacles during the planning and execution phase of the project. However, DSCL actively engaged with the line departments through joint site visits and made correspondence to facilitate the necessary utility shifting.

The reply is not acceptable because DSCL should have identified these hindrances during the planning stage and developed a concrete plan for shifting utilities or removing obstacles rather than making a lump-sum provision of ₹ 2.00 crore for utility shifting. Furthermore, despite the participation of Heads of Departments and representatives from various line departments<sup>30</sup> in the HPSC/Board of DSCL, the site issues could not be resolved.

### 3.2.2 Non-refund of unutilised funds

Against the three MoU, an amount of ₹ 76.84 crore, as detailed in **Table-3.4** below, was released as advance to B&R for implementation of three projects.

**Table-3.4: Details of funds released to B&R**

			(₹ in crore)
Sl. No.	Name of the Work	Date of release of fund	Amount
1	Smart Road work	23.10.2019	20.00
2	Drainage work	16.09.2020	1.63

<sup>29</sup> Obstacles refers to transformers, electric poles, bus stand, police booth, trees, dustbins, hoardings and encroachment *etc.*

<sup>30</sup> HPSC: UDD, Planning Department, PWD, Peyjal Department, Energy Department and Mayor, Nagar Nigam, Board of DSCL, MDDA, UDD, Nagar Nigam, Energy Department, Jal Sansthan and PWD.

Sl. No.	Name of the Work	Date of release of fund	Amount
3	Sewerage work	16.09.2020	2.84
4	Smart Road work	29.09.2020	30.00
5	Smart Road work	10.09.2021	20.00
<b>Total</b>			<b>74.47</b>
Centage Charge		13.10.2021	2.37
<b>Grand Total</b>			<b>76.84</b>

As per joint measurement,<sup>31</sup> the implementing agency (B&R) had executed the work costing ₹ 57.78 crore (including GST and centage charges) till the date of termination (14 September 2022) of the MoU. Audit noticed that the unutilised amount of ₹ 19.06 crore<sup>32</sup> lying with B&R had not been remitted to DSCL. B&R cited various reasons like pending recovery of mobilization advance (₹ 7.02 crore) and contractors claim (₹ 33.33 crore) for losses incurred due to termination of contract. It further clarified that the contractor has initiated arbitration against the IA *i.e.*, B&R and the refund is contingent upon settlement of claim with the contractor.

During the Exit Conference (21 June 2024), the Government accepted the fact and stated that they pursued (March 2024) the matter with B&R to adjust and return the unutilised amount. It was further explained that since the contractor has initiated arbitration to settle a claim of ₹ 33.33 crore against B&R; B&R has indicated that the unutilised amount will be returned after the arbitration is settled. Additionally, in the 28<sup>th</sup> Board of Directors meeting (19 June 2024), it was decided that DSCL would arrange a meeting between DSCL, B&R, and the contractor, to be headed by the Chairman, DSCL (Divisional Commissioner, Garhwal) to settle the case. The fact remains that refund of ₹ 19.06 crore from B&R was pending as of November 2024.

### **3.3 Non-imposition of penalty for delay in execution of projects**

Audit noticed instances of delays ranging from 19 months to 38 months with reference to the MoUs executed with IAs in execution of eight projects as detailed in **Appendix-3.2**. In one out of eight instances *i.e.*, Smart Road, there was cost escalation **as detailed in paragraph 3.5** below. Despite the provision of penalties in the respective contracts, no penalty was imposed by DSCL in case of Smart Road as it failed to provide hindrance free work front to B&R. Further, in case of Rejuvenation of Parade Ground, partial penalty was imposed as discussed in the succeeding **paragraph 3.3.1**. Similarly, in case of Pedestrianisation of Paltan Bazaar, penalty was imposed but partially recovered as discussed below in **paragraph 3.3.2**.

#### **3.3.1 Non-imposition of penalty in case of Rejuvenation of Parade Ground**

Clause 56.1 of the General Condition of Contract, in conjunction with Particular Condition of Contract 58.1, stipulates that if the contract is terminated due to a fundamental breach by the contractor, the employer shall recover 20 *per cent* of the value of the work that remains incomplete.

<sup>31</sup> Representatives of DSCL, B&R, PMC and Contractor of B&R.

<sup>32</sup> ₹ 19.06 crore = ₹ 76.84 crore - ₹ 57.78 crore.

DSCL entered into an agreement (30 October 2019) with a contractor<sup>33</sup> for ₹ 18.92 crore (excluding GST) for Rejuvenation of Parade Ground. The work was scheduled to be completed by 30 October 2020. Due to slow progress of the work even after granting time extension, the Board of DSCL decided (July 2022) to terminate the contract. For delay in execution of work liquidated damages of ₹ 1.90 crore (10 per cent of contract value) was recovered from the contractor.

Further, the balance work (₹ 5.99 crore<sup>34</sup>) was transferred (January 2023) to PIU-PWD and letter of termination was issued (February 2023) to the contractor. The work was under progress as of October, 2023.

Audit scrutiny showed that the work amounting to ₹ 11.87 crore<sup>35</sup> (excluding GST) was executed against the agreement cost till the date of termination (February 2023) of the contract. Resultantly, the work amounting to ₹ 7.05 crore<sup>36</sup> was left incomplete by the contractor. As per the aforesaid provision of the contract, the contractor was liable to pay penalty of ₹ 1.41 crore<sup>37</sup>, but the DSCL had not imposed any penalty on the contractor for the leftover work.

The Government replied (30 May 2024) that the matter had been discussed with the legal expert to evaluate the available options and identify the most appropriate course of action. If it is determined that the recovery of penalties for the incomplete work is justified under the contract terms, DSCL will proceed accordingly.

The reply is not acceptable as the DSCL should have imposed and recovered penalty as per the provisions of the contract.

### 3.3.2 Non-imposition of penalty in case of Pedestrianisation of Paltan Bazaar

According to Clause 47.1 of the General Condition of Contract, in conjunction with Particular Condition 47.1, the contractor shall be liable to pay liquidated damages to the employer at a rate of 0.5 per cent of the final contract value per week for any delay in completion beyond the intended completion date, subject to maximum of 10 per cent of the final contract price.

DSCL entered into an agreement (10 December 2019) with a contractor<sup>38</sup> for ₹ 12.33 crore (excluding GST) for Pedestrianisation of Paltan Bazaar. Due to change in the scope of work, the contract was concluded (May 2023) with an expenditure of ₹ 5.95 crore. As per the terms of the contract, the project was initially scheduled to be completed by 10 December 2020. Due to the contractor's inability to meet the deadline, DSCL granted (October 2020) the first extension for one year without imposing any penalty and granted (September 2022) the second extension of one year (until

<sup>33</sup> Ch. Sandeep Contractor & Suppliers in JV with M/S Ajay Kumar Contractor.

<sup>34</sup> Excluding O&M cost of ₹ 1.07 crore proposed to handed over to MDDA and works valuing ₹ 0.47 crore earlier executed by PWD.

<sup>35</sup> ₹ 11.40 crore by Ch. Sandeep Contractor & Suppliers in JV with M/S Ajay Kumar Contractor and ₹ 0.47 crore earlier executed by PWD.

<sup>36</sup> ₹ 7.05 crore = ₹ 18.92 crore - ₹ 11.87 crore

<sup>37</sup> ₹ 1.41 crore = ₹ 7.05 crore (cost of remaining work) x 20 per cent.

<sup>38</sup> Ch. Sandeep Contractor & Suppliers in JV with M/S Ajay Kumar Contractor.

10 December 2022) with a penalty of 0.5 *per cent* of final contract value *i.e.*, ₹ 5.95 crore in contravention to the provisions of the contract which provides for levy of 0.5 *per cent* penalty per week subject to maximum of 10 *per cent* of the final contract value.

It was noticed that DSCL imposed and recovered penalty of ₹ 3.84 lakh only, whereas a penalty of ₹ 59.50 lakh<sup>39</sup> was leviable on the contractor as per the terms of the contract. Thus, by applying a reduced penalty to the contractor, an undue benefit of ₹ 55.66 lakh<sup>40</sup> was conferred upon the contractor.

The Government stated (30 May 2024) that the contractor completed the work before 10 December 2022 (*date up to which time extension given*), so under the direction of the Board, the indicative penalty was imposed for a week only.

The reply is not acceptable because, according to the records, the work was not completed till 10 December 2022 as many letters were written to the contractor after the aforesaid date to complete the work. Further, DSCL should have imposed the penalty as per the terms and conditions of the contract and in accordance with the Board's decision instead of imposing an indicative penalty.

#### **3.4 Execution of work costing ₹ 2.93 crore without inviting tender**

Rule 3 (2) of the Uttarakhand Procurement Rules, 2017 stipulates that all procurements shall be made through tenders, unless exempted under these rules or specific orders. Further, Rule 136 (1) (vi) of the GFR 2017 provides that “No work shall be commenced, or liability incurred in connection with it until tenders are invited and processed in accordance with rules”.

Scrutiny of the records of the project “Rejuvenation of Parade Ground” revealed that balance works costing ₹ 5.99 crore under the project were transferred (08 January 2023) to PIU-PWD by DSCL. It was observed that the PIU had incurred an expenditure of ₹ 2.93 crore<sup>41</sup> on execution of seven works, as detailed in **Table-3.5** below, without following the tendering process as envisaged in the Procurement Rules and GFR. Further scrutiny revealed that five out of these seven works were executed on selection basis after inviting quotations and the remaining two works were executed as extra items under the contract bond of another works (CITIIS and VIP stage).

**Table-3.5: Details of works executed without calling tenders**

Sl. No.	Name of work	Contract no. & Date	Expenditure (₹)
1	Providing & fixing of sliding gate towards VIP parking and Granite work on outer boundary wall	C.B. No. 11 dated:03.07.2023	22,75,639
2	Providing & fixing of Bollards on boundary wall of Parade ground and fixing of railing towards Pant Road & Convent Road	C.B. No. 12 dated:03.7.2023	22,07,282

<sup>39</sup> ₹ 59.50 lakh = ₹ 5.95 crore x 52-week x 0.5 *per cent* per week (capped at 10 *per cent* of the value of work done *i.e.*, ₹ 5.95 crore).

<sup>40</sup> ₹ 55.66 lakh= ₹ 59.50 lakh - ₹ 3.84 lakh (already recovered).

<sup>41</sup> Expenditure incurred during August 2023 to October 2023.

Sl. No.	Name of work	Contract no. & Date	Expenditure (₹)
3	Construction works of gate towards sports complex, parking and Pant Road and laying of HDPE pipe at Parade ground.	C.B. No. 13 dated:06.07.2023	16,15,692
4	Facade work from Survey chowk to Doon club & in Kids zone	C.B. No. 16 dated:03.08.2023	20,92,756
5	Interlocking, CC pavement & iron grating work on Kanak Picture Palace Road and supply of JCB and tractor trolley for cleaning of debris from Sports complex.	C.B. No. 17 dated:03.08.2023	9,46,500
<b>Total-A</b>			<b>91,37,869</b>
6	Road works executed as an extra item under the project CITIIS		1,36,02,773
7	Works related to fencing and railing executed as an extra item under the work VIP stage.		65,78,143
<b>Total-B</b>			<b>2,01,80,916</b>
<b>Grand Total (A+B)</b>			<b>2,93,18,785</b>

During the Exit Conference (21 June 2024), the Government stated that due to time constraints, the work was carried out through selection bond by PIU-PWD in accordance with Departmental Rules & Regulations, as it needed to be completed before Independence Day (15 August 2023).

The reply of the Government is not acceptable as only 51 *per cent*<sup>42</sup> of the work has been executed till date of audit (November 2023) without following the Procurement Rules. Further, after handing over of the balance work to the PIU-PWD in January 2023, it executed contract bond on selection basis after a period of six to seven months. This itself indicates that time constraint, as indicated in reply, is not justified.

### 3.5 Cost escalation of ₹ 10.34 crore in Smart Road project

DSCL entered (12 July 2019) into an MoU of ₹ 203.23 crore<sup>43</sup> with B&R (Implementing Agency) for execution of works under Smart Road project. As per the MoU, the work was to be started from 01 October 2019 and scheduled to be completed by 01 July 2021.

Scrutiny of the records revealed that DSCL failed to provide the hindrance-free work front and drawings for the execution of works under the projects to the Implementing Agency (IA). Later, DSCL terminated (14 September 2022) the MoU with the IA due to slow progress of work and nominated (September 2022) PWD as IA for the leftover works. IA had executed the works<sup>44</sup> amounting to ₹ 57.78 crore only till the date of termination of the MoU and DSCL entered into a fresh MoU (17 November 2022) at the sanctioned cost of ₹ 138.06 crore with PWD for the left over works after de-scoping and changing nature of works costing ₹ 33.19 crore under the project. On comparison of rates approved in old DPR and the rates in new DPR/ approved cost for the common items, it was revealed that the cost of the major items of the project increased by ₹ 10.34 crore due to price escalation as detailed in *Appendix-3.3*.

<sup>42</sup> 51 *per cent* = Value of work done ₹3.08 crore / ₹ 5.99 crore (cost of work) \*100.

<sup>43</sup> Including centage charges and other charges.

<sup>44</sup> Project Smart roads and Project Integrated Sewerage.

During the Exit Conference (21 June 2024), the Government justified cost escalation by stating that the cost of the balance work was ₹ 160.62 crore (including price escalation clause of the contract with B&R), whereas the balance work was awarded to PIU- PWD at the cost of ₹ 138.00 crore.

The reply of the Government itself confirms the audit observation indicating de-scoping/change in nature of works costing ₹ 33.19 crore out of the balance work of ₹ 160.62 crore, prior to transferring the works to the PIU-PWD at the cost of ₹ 138.00 crore. Further, audit calculated the cost escalation only for the items common in both the DPRs/approved cost.

### **3.6 Recommendations**

1. *The State Government should ensure that payment terms linked with measurable project deliverables are incorporated in the future contracts.*
2. *Accountability should be fixed for irregularities in payments to PMC, including unverified payment, inadmissible payments, wasteful expenditure, procurement violations, and failure to adhere to contractual provisions.*
3. *The State Government should ensure that the ongoing projects are completed expeditiously in coordination with the line departments and implementing agencies.*
4. *The State Government should ensure prompt recovery of the unutilised amounts pending with the implementing agencies.*

**Chapter-4**  
**Financial Irregularities**



## Chapter - 4

### Financial Irregularities

*This Chapter contains audit findings related to financial irregularities such as overpayment, irregular expenditure from SCM fund, loss of interest and short recovery of interest on mobilisation advance.*

Smart City Mission is a Centrally Sponsored Scheme, under which the Centre has to provide maximum of ₹ 500 crore for each city and an equal share has to be contributed by the State/Urban Local Bodies (ULB) for meeting expenditure on Project and Administration & Office Expenses (A&OE). The position of the funds released to DSCL and the utilisation by it up to March 2023 is detailed in **Table-4.1** below:

**Table-4.1: Details of funds received and expenditure incurred up to March 2023**

(₹ in crore)

Sl. No.	Year	Funds released by GoI to GoU	Funds released to DSCL			Expenditure
			Central Share	State Share	Total	
1	2015-16	2.00	0.00	0.00	0.00	0.00
2	2016-17	0.00	2.00	0.00	2.00	0.00
3	2017-18	18.00	0.00	3.00	3.00	2.00
4	2018-19	40.00	54.00	53.00	107.00	9.68
5	2019-20	136.00	109.00	74.00	183.00	140.84
6	2020-21	51.50	82.50	5.00	87.50	129.66
7	2021-22	0.00	0.00	115.00	115.00	148.86
8	2022-23	147.00	144.50	95.50	240.00	203.07
<b>Total</b>		<b>394.50</b>	<b>392.00<sup>1</sup></b>	<b>345.50<sup>2</sup></b>	<b>737.50</b>	<b>634.11</b>

Source: Data provided by DSCL.

As is evident from the above table, the GoI had released ₹ 394.50 crore to the GoU up to March 2023 against which GoU released ₹ 392.00 crore as Central share to DSCL. The GoU had also released ₹ 345.50 crore as State matching share to DSCL up to March 2023. Against the total released funds of ₹ 737.50 crore (project fund ₹ 696.50 crore and A&OE fund ₹ 41.00 crore), DSCL had incurred an expenditure of ₹ 634.11 crore (project fund ₹ 591.38 crore and A&OE fund ₹ 42.73 crore<sup>3</sup>).

The Audit findings relating to the financial irregularities are discussed below:

#### 4.1 Delay in release of funds

As per the sanction orders of MoHUA, State Government should transfer the Central share of fund along with its matching share to the bank account of Special Purpose Vehicle (SPV) within seven days of receipt.

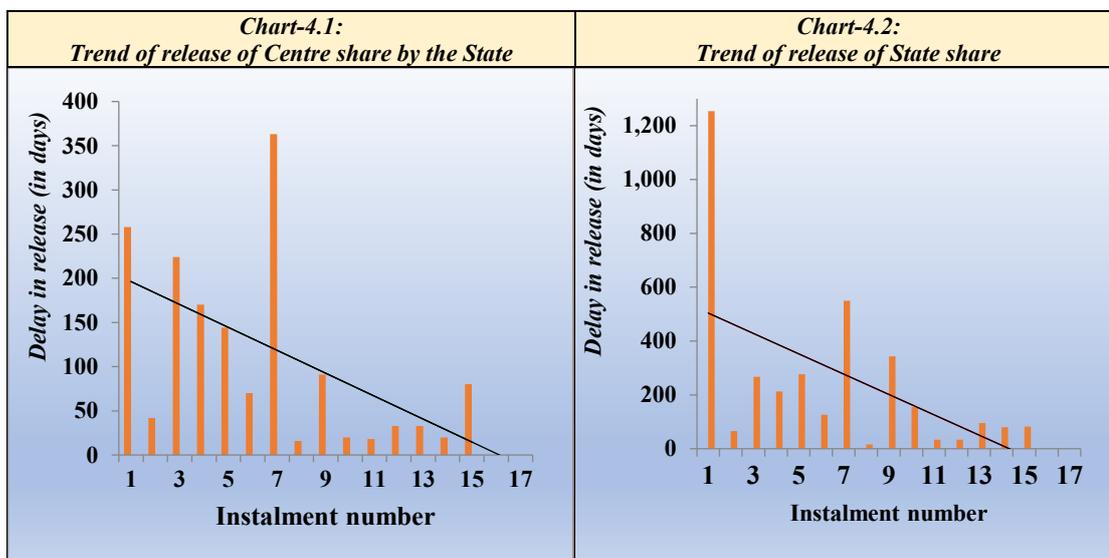
Audit observed that in contravention to the Ministry's orders, there was inordinate delay ranging from 16 days to 363 days in release of Central share of fund by GoU to the SPV and GoU also released its matching share with the delay ranging from 16 days to 1,254 days as detailed in **Appendix-4.1**.

<sup>1</sup> ₹ 2.50 crore of Central Share was released in May 2023 by the State.

<sup>2</sup> Balance amount of ₹ 49.00 crore of State share was released in May 2023.

<sup>3</sup> An amount of ₹ 3.00 crore was transferred from Project fund in March 2022 to meet the A&OE expenditure.

Audit also noticed a decreasing trend of delay in release of funds as shown in **Chart-4.1** and **Chart-4.2** below. This trend coincided with the operation of Single Nodal Account (SNA<sup>4</sup>) system by GoI in March 2021.



#### 4.2 Over payment of ₹ 34.70 lakh in Modern Doon Library project

An MoU of ₹ 13.25 crore was signed (September 2019) between DSCL and an Implementing Agency<sup>5</sup> for the construction of Modern Doon Library and procurement of the supporting items<sup>6</sup>.

Audit scrutiny revealed that during the execution of the work, 64 items worth ₹ 2.76 crore were sanctioned as extra items. The rates of 46 items<sup>7</sup>, out of these 64 items were inclusive of GST. Despite the inclusion of GST, a payment of ₹ 19.82 lakh as GST (18 per cent) was made to the contractor for these 46 items. Consequently, GST was paid twice on these items and thus, an excess payment of ₹ 19.82 lakh was made to the contractor.

Further, 40 desktops valuing ₹ 26.20 lakh were also approved as extra items at higher rates, whereas the items with the same specifications were already included in the scope of the contract. As a result, an excess payment of ₹ 14.88 lakh was made to the contractor as detailed in **Table-4.2** below:

**Table-4.2: Details of excess payment**

(Amount in ₹)					
Item	As included in original Contract	Permitted as extra item and paid	Difference of rate	No of item	Amount
1	2	3	4 (3-2)	5	6 (5 x 4)
Computers	33,964.29	65,500	31,535.71	40	12,61,428.40
<b>GST (18 per cent)</b>					<b>2,27,057.11</b>
<b>Grand Total</b>					<b>14,88,485.51</b>

Thus, undue benefit of ₹ 34.70 lakh<sup>8</sup> was extended to the contractor.

<sup>4</sup> Opened by DSCL in April 2022.

<sup>5</sup> Project Manager (Khel), Uttarakhand Peyjal Nigam, Dehradun.

<sup>6</sup> Furniture, Computer, CCTV and other IT equipment.

<sup>7</sup> 19 items worth ₹ 1.79 crore were based on DSR 2018, 27 items worth ₹ 60.58 lakh were on market rates.

<sup>8</sup> ₹ 34.70 lakh = ₹ 19.82 lakh+ ₹ 14.88 lakh.

During the Exit Conference (21 June 2024), while accepting the Audit observation, it was stated that the amount of GST had been recovered from the contractor and on the issue of excess payment for desktops to the contractor, it was assured that the excess payment would be recovered from the contractor.

#### 4.3 Irregular expenditure from SCM Fund

The SCM was planned to be executed through two approaches: Area-Based Development (ABD) and a Pan-city initiatives. As per Paragraph 10.3 of the SCM Guidelines, funds provided by the GoI in the SCM to the SPV will be in the form of tied grant and kept in a separate Grant Fund. These funds will be utilised only for the purposes for which the grants have been given and subject to the conditions laid down by the MoHUA. Further, as per sanction orders of the MoHUA, the money will be utilised strictly in accordance with the SCM Guidelines and for the purpose for which it has been sanctioned.

Scrutiny of records revealed that, four roads<sup>9</sup> selected for Smart Road Project (SRP) were in the periphery of ABD area. The scope of works in SRP included up-gradation of the road through strengthening of the pavement, provision of drains, multi utility duct (MUD), sewerage work, underground water supply lines *etc.* as discussed in *paragraph 2.4.5 of Chapter - 2*. Audit observed that, out of the above four roads, the work on Chakrata Road<sup>10</sup> (total length 1.9 km) also included a 950-meter stretch located outside the ABD area. DSCL incurred an expenditure of ₹ 19.47 crore<sup>11</sup> from the SCM funds on execution of works beyond the ABD area, which was in violation of the provisions of the SCM Guidelines.

On being pointed out by Audit, the Government accepted (May 2024) the fact and stated that it was strategically done to encompass the VVIP area of Yamuna Colony which witnesses continuous movement of VIPs and heavy tourist traffic. However, the fact remains that, in violation of the SCM Guidelines, an irregular expenditure of ₹ 19.47 crore was incurred from the Smart City fund which was a tied grant.

#### 4.4 Loss of interest

The implementation of the SCM at the city level was to be done by a SPV to be incorporated as a limited company under the Companies Act, 2013. DSCL was incorporated (15 September 2017) as a limited company under the Companies Act, 2013. To protect the best financial interest, DSCL was required to exercise financial prudence while making decisions and adhering to the existing Rules & Regulations.

Scrutiny of the records of the DSCL revealed that the DSCL had operated two current accounts at HDFC bank for project fund and A&OE fund during the period 2017-18 to 2020-21. The Statutory Auditors in their Report on financial statements of DSCL for the year ended on 31 March 2019, had pointed out that a significant amount of funds

<sup>9</sup> Haridwar Road, EC Road, Rajpur Road and Chakrata Road.

<sup>10</sup> From *Ghanta Ghar* to Kishan Nagar Chowk. The said route can be divided into two parts [from *Ghanta Ghar* to Bindal Bridge (950 meters) and from Bindal Bridge to Kishan Nagar Chowk (950 meters)].

<sup>11</sup> ₹ 19.47 crore = [Chakrata Road: ₹ 13.78 crore (*On pro-rata basis*) + ₹ 5.69 crore (shifting of retaining wall of Doon School)].

remained idle in both the current accounts and suggested that these idle funds may be invested prudently to earn interest income in interest-bearing securities payable on demand. Further scrutiny showed that DSCL formulated (October 2020), three years after its inception, a policy for investment of the unutilised funds in a term/fixed deposit in a bank for a period in which maximum interest may accrue. DSCL closed<sup>12</sup> both the accounts and opened new accounts<sup>13</sup> at a different bank to generate interest on the unutilised funds.

Consequently, the three-year delay caused these unutilised funds to remain in a non-interest-bearing bank account, resulting in potential loss of interest of ₹ 6.20 crore<sup>14</sup> to GoI/GoU as detailed in the **Table-4.3** given below:

**Table-4.3: Details of interest**

						<i>(₹ in lakh)</i>
Sl. No.	Account Number	2017-18	2018-19	2019-20	2020-21	Total
1	50200027724411	0.50	83.43	6.17	3.74	93.84
2	50200032926554	0.00	62.54	220.85	242.80	526.19
<b>Total</b>		<b>0.50</b>	<b>145.97</b>	<b>227.02</b>	<b>246.54</b>	<b>620.03</b>

The Government, while accepting the audit observation, stated (30 May 2024) that the current accounts were opened after obtaining approval of the Board of DSCL. It further clarified that all SNA accounts have now been converted to savings accounts.

The fact remains that the GoI/GoU suffered losses of interest due to delay in exercising financial prudence.

#### **4.5 Short recovery of interest on mobilisation advance**

Central Vigilance Commission guidelines 2007 provides that the amount of Mobilisation Advance (MA), interest to be charged, if any; its recovery schedule and any other relevant detail should be explicitly stipulated in the tendered documents upfront. Rule 53 (2) of Uttarakhand Procurement Rules 2017 also provides that the advances shall be subject to payment of interest, till the amount is deducted or adjusted. A bank guarantee or adjustment of advance should be taken to secure the repayment or adjustment of advance. Further, as per Section 32.5 of Central Public Works Department (CPWD) Manual, MA limited to 10 *per cent* of tendered amount at 10 *per cent* simple interest can be sanctioned to the contractors on specific request as per terms of the contract and such advance should be released in not less than two instalments.

DSCL released (16 January 2020) an amount of ₹ 3.64 crore as MA to the contractor. Audit noticed that there was no provision in the contract for the rate of interest to be charged on MA. However, in the absence of rate of interest to be charged on MA, a lump sum amount of ₹ 10.00 lakh was recovered (March 2021) as interest on MA till

<sup>12</sup> HDFC Bank accounts 50200027724411 and 50200032926554 were closed on 14 January 2021 and 12 November 2020, respectively.

<sup>13</sup> Mostly savings bank accounts.

<sup>14</sup> Calculated @ three *per cent*.

the date of audit (October 2023). Considering the interest rate as provided in the CPWD manual, interest to be charged from the contractor was worked out to ₹ 91.12 lakh by audit, as detailed in *Appendix-4.2*.

During the Exit Conference (21 June 2024), it was informed that in the 28<sup>th</sup> Board of Directors meeting (19 June 2024) of DSCL, the interest rate on MA had been decided at the rate of 10 *per cent* and steps will be taken to recover the interest on MA. The fact remains that interest on MA was recovered short by ₹ 81.12 lakh as of June 2024.

#### **4.6 Recommendations**

- 1. The State Government should ensure prompt recovery against overpayment and fix accountability.*
- 2. The State Government should explicitly include the provision for interest rate to be charged on Mobilisation Advance, in the Procurement Rules.*



**Chapter-5**  
**Governance Framework**



## Chapter - 5

### Governance Framework

*This Chapter presents audit findings highlighting the lack of coordination among departments during the implementation of the Smart Cities Mission (SCM), despite the presence of representatives from all key line departments in the State Level High Powered Steering Committee and Inter-departmental Coordination Task Force. The establishment of a Special Purpose Vehicle, as envisaged in the SCM Guidelines, proved ineffective due to the absence of full-time appointments for the Chief Executive Officer (CEO), Additional Chief Executive Officer (ACEO), and Finance Controller (FC). The Chapter also discusses instances of quality control issues.*

A well-defined Monitoring and Internal Control Mechanism in SCM implementation provides a reasonable assurance that necessary rules and regulations are followed; resources are used in a planned manner and are protected from mismanagement in order to achieve the intended objectives of the SCM. The implementation of projects under the SCM was examined in the light of existing supervision, monitoring, and internal control mechanisms and in terms of the guidelines of the SCM. The audit findings are discussed below:

#### 5.1 Role of designated committees

##### 5.1.1 High Powered Steering Committee

Paragraph 13.2 of the SCM Guidelines stipulated for appointment of a State Level High Powered Steering Committee (HPSC) chaired by the Chief Secretary, which would steer the Mission Programme in its entirety. The HPSC will have representatives of State Government departments. The Mayor and Municipal Commissioner of the ULB relating to the Smart City would be represented in the HPSC. The key responsibilities of the HPSC were as below:

- i. To provide guidance to the Mission and provide State level platform for exchange of ideas pertaining to development of Smart Cities.
- ii. To oversee the process of first stage intra-State competition on the basis of Stage-1 criteria.
- iii. To review the Smart City Proposals (SCPs) and send them to the MoHUA for participation in the Challenge.

In the state of Uttarakhand, HPSC was formed in July 2015 which was further reconstituted in July 2017 with the directions that it will comply with the guidelines issued by the GoI from time to time. The HPSC held total 17 meetings from July 2017 to March 2023. During these meetings, HPSC accorded approval for selection of PMC, extra works, de-scoping of works *etc.*, DPRs of the projects, and reviewed the progress of the projects.

Audit observed that despite the representative from all the key line departments<sup>1</sup>, HPSC could not resolve issues of lack of coordination among various line departments during implementation of the projects as discussed in **Paragraphs 2.4.1.2, 2.4.1.5, 2.4.2, 2.4.3, 2.5 and 3.2.1 (ii)**. Consequently, most of the projects were not completed within the stipulated time frame as discussed in **Paragraph 3.3**. Eight projects<sup>2</sup> were still under progress (as on March 2023) due to delay in availability of hindrance free projects sites and termination of the existing contracts and execution of new contracts.

During the Exit Conference (21 June 2024), the Government stated that the issues primarily stemmed from a lack of coordination at lower levels rather than higher levels. The reply itself indicates inability of the Government to address the issues of lack of coordination.

### **5.1.2 Inter-departmental Task Force**

As per Para 9.1.1 (short listing of cities by States) of SCM guidelines, an Inter-departmental Task Force (IDTF) as elaborated in Annexure-3, was to be constituted in order to make city smart as per directions/ guidelines issued by GoI/ State Government with respect to SCM.

Audit observed that an IDTF<sup>3</sup> was constituted (July 2015) by the GoU for implementation and monitoring. However, the order did not specify the roles and responsibilities of the IDTF. Further, during the meetings with the different line departments, issues related to the maintenance of Smart Roads, implementation of projects and progress of projects under SCM were discussed. However, issues related to coordination between the various line departments such as providing hindrance free site for Smart Road project, Green Building project, Pedestrianisation of Paltan Bazaar project, Sewerage project were not discussed with the line departments. Consequently, the formation of IDTF appeared to be a mere formality, as there was no clear vision for facilitating coordination between departments to ensure smooth project execution. Several instances of lack of coordination among the line departments and DSCL along with delays and disputes over responsibilities were noticed during audit as detailed in the case study below and **Paragraph 2.4.1.2, 2.4.1.6, 2.4.2, 2.4.3, 2.5 and 3.2.1 (ii)**. These challenges have affected the implementation of projects and inordinate delay in completion of project as well as damage to the completed work. One specific instance as discussed in the following case study also indicated lack of coordination among the line departments.

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<sup>1</sup> UDD, PWD, Finance, Planning Department, Drinking Water Department, Power Department, Medical, Health & Family Welfare Department and Municipal Commissioner, Nagar Nigam Dehradun.

<sup>2</sup> Green Building, Intergraded Sewerage, Integrated Drainage, Smart Roads, CITIIS, Façade, Water Augmentation and Smart Meter and Smart Pole.

<sup>3</sup> Vice-Chairman MDDA (Nodal Officer Smart City) as Chairman, DM Dehradun, DFO Dehradun, SSP Dehradun, Municipal Commissioner, Nagar Nigam Dehradun, Chief Town & Country Planning, CMO Dehradun, Chief Education Officer Dehradun, Superintending Engineer PWD, GM Uttarakhand Power Corporation, Superintending Engineer Irrigation Department, Superintending Engineer Uttarakhand Peyjal Nigam, GM Uttarakhand Jal Sansthan, Chief Environment Officer Uttarakhand Pollution Control Board, Executive Engineer Directorate UDD (Members).

### Case Study 1: Pedestrianisation of Paltan Bazaar

The pedestrianisation of Paltan Bazaar project, with a cost of ₹ 13.10 crore, aimed at developing a 1.2 km stretch from Clock Tower to Darshani Gate. DSCL involved multiple Implementing Agencies (IAs) for execution of works in a stretch of 1.2 km, as depicted in **Table-5.1** below:

**Table-5.1: Details of different IAs**

Name of Works	Section-A Clock Tower to Kotwali		Section-B Kotwali to Darshani Gate	
	Particulars of Works	IA	Particulars of Works	IA
<b>Road Work</b>	Interlocking Road	DSCL	Black top road	PWD
<b>Drain Work</b>	Construction of drain	DSCL	Renovation of drain	DSCL
<b>Multi Utility Duct</b>	Laying of MUD	DSCL	<ul style="list-style-type: none"> <li>➤ HDPE Conduit Work</li> <li>➤ Communication line</li> </ul>	UPCL DSCL
<b>Footpath Work</b>	Construction of footpath	PWD	Construction of footpath	DSCL
<b>Electrical work</b>	<ul style="list-style-type: none"> <li>➤ Shifting of Electrical line into MUD, Installation of RMU/Feeder pillar, Connection to consumers</li> <li>➤ Installation of Pole</li> </ul>	UPCL DSCL	<ul style="list-style-type: none"> <li>➤ Shifting of Electrical line into HDPE Conduit, Installation of RMU/Feeder pillar, Connection to consumers</li> <li>➤ Installation of Pole</li> <li>➤ Chamber work for electric wire</li> </ul>	UPCL DSCL PWD
<b>Water Supply Work</b>	Uttarakhand Jal Sansthan.			
<b>Sewerage Work</b>	Bridge & Roof India Limited.			
Remaining drainage work on the patches where UPCL electric poles are not dismantled –PWD				

Audit scrutiny revealed several issues stemming from poor coordination between line departments and DSCL. These included the installation of footpath tiles before underground electrical cables, necessitating their removal for cable-laying; the electricity department's failure to remove electric poles obstructing drain construction until work completion; a nearly two-year delay in finalising space for compact sub-station installation; disputes over right-of-way for compact sub-station and rising main unit installation; and the construction of some electrical and sewer chambers above road level, posing risks to pedestrians. UPCL also faced deficiencies in cabling work within the MUD. These issues, compounded by delays and disputes over responsibilities, resulted in significant project delays and public inconvenience due to poor coordination among implementing agencies and line departments.

### 5.2 Role of Special Purpose Vehicle

As per the provision of Para 10.1 of SCM guidelines, for implementation of the Mission at the City level, an SPV<sup>4</sup> (Special Purpose Vehicle) was to be established. The role of SPV was to plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate the Smart City Development Projects. As per the approved

<sup>4</sup> SPV headed by full time CEO and having nominees of Central Government, State Government and ULB on its Board.

manpower structure of DSCL, only top three posts *i.e.* CEO, ACEO and Finance Officer/ Finance Controller (FC) were to be filled from the IAS cadre, IAS/Sr. PCS cadre, and State Finance Services (SFS) cadre respectively. The remaining posts were intended to be filled on a contractual or deputation basis. In this regard, the following shortcomings were noticed:

### 5.2.1 Non-appointment of a full time CEO

As per Para 10.1 read with Annexure 5 (point 3.3) of the SCM Guidelines, the SPV was to be headed by a full-time CEO for a fixed term of three years. Further, the advisory issued (October 2018) by MoHUA, provides that the organisations having a full time CEO facilitates quick decision making and better results in terms of frequent board meetings and faster rate of project implementation in general. On the contrary, a part-time CEO may not be in a position to give complete attention due to other pressing concerns at hand.

Audit observed that, since inception of DSCL, the charge of CEO of DSCL was assigned to District Magistrate, Dehradun as an additional charge. Further, audit noticed that within a period of almost six years, seven District Magistrates held the charge of CEO as detailed in **Table-5.2** below:

**Table-5.2: Details of officers who held the charge of CEO**

Sl. No.	Name of the Officers	Tenure		Duration of charge (in months)
		From	To	
1	Sh. Dilip Jawalkar, IAS	10.08.2017	25.07.2018	11
2	Sh. Shailesh Baghuli, IAS	26.07.2018	13.02.2019	07
3	Dr. Ashish Kumar Srivastav, IAS	13.02.2019	08.06.2020	15
4	Sh. Ranvir Singh Chauhan, IAS	08.06.2020	20.08.2020	2 ½
5	Dr. Ashish Kumar Srivastav, IAS	20.08.2020	02.08.2021	12
6	Dr. R. Rajesh Kumar, IAS	02.08.2021	11.07.2022	11
7	Smt. Sonika, IAS	11.07.2022	03.09.2024	26

It is evident from the table that since the establishment of the DSCL, the CEO was neither appointed on a full-time basis nor for the fixed tenure of three years. Audit observed that projects implementation suffered from number of deficiencies as outlined in *paragraph 3.1.2.1, 3.1.2.2, 3.1.2.3, 3.1.2.4, 3.1.2.5, 3.1.2.6, 3.1.3, 3.2.1, 3.3 and 3.5*. Similarly, Audit observed that the appointments of other key functionaries *i.e.*, ACEO and FC were also on short-term basis as detailed in **Table-5.3** below:

**Table-5.3: Details of officers posted in DSCL**

Sl. No.	Designation	Name of the Officers	Tenure	
			From	To
1	Additional Chief Executive officer	Dr. Ashish Kumar Srivastav, IAS	12.12.2017	13.02.2019
		Sh. Abhishek Ruhela, IAS	09.03.2019	22.11.2019
		Sh. Ashish Bhatgain, PCS	26.12.2019	31.07.2020
		Sh. Girish Chand Gunwant, PCS	11.09.2020	16.09.2021
		Sh. Krishn Kumar Mishra, PCS	16.09.2021	01.09.2022
		Sh. Shyam Singh Rana, PCS	01.09.2022	21.11.2023
		Sh. Tirathpal Singh, PCS	13.12.2023	Till Date
2	Finance Controller	Sh. Ganga Prasad, SFS	10.08.2017	10.08.2020
		Sh. Dinesh Chand Lohani, SFS	10.08.2020	18.09.2020
		Sh. Abhishek Kumar Anand, PCS	19.09.2020	30.06.2022
		Dr. Tanzeem Ali, PCS	15.07.2022	Till Date

It is evident from the table that none of the officers were appointed for a fixed term and the posts of ACEO and FC were held by the officers from their respective cadres as an additional charge. In addition, other key posts<sup>5</sup> of sensitive wings like finance and procurement were filled on a contractual basis.

Thus, the idea of establishing SPV in the spirit of Guidelines was ineffective as SCM suffered from various project management deficiencies like planning, coordination, dispute resolution, monitoring, remedial actions on the reported issues *etc.*

In reply, the Government accepted (30 May 2024) the audit observation acknowledging the importance of full-time appointments for effective decision making and project execution. The Government further stated that steps would be taken to ensure compliance with the guidelines.

The fact remains that not appointing of a full-time CEO was against the provision of SCM Guidelines. Since the initiation of the SCM, no officer in the top three positions had been appointed on a full-time basis. Furthermore, most of the projects could not be completed within the scheduled timeframe. This indicates lack of seriousness in implementation of the SCM projects as envisaged in the SCM Guidelines issued by the GoI.

### 5.3 Quality Control

It is the primary responsibility of PMC and DSCL to ensure that quality work is done by the contractor. Third-Party Agencies (TPAs) were also appointed from time to time by the GoU for quality control of the works under the SCM projects.

Audit examination of records revealed instances of substandard works during project implementation, which were highlighted through multiple channels including TPAs, media reports, citizen complaints, inspections conducted by higher authorities, and physical verifications done by Audit, as discussed in *Case Study-2* and *paragraph 5.3.1* below:

#### ***Case Study - 2: Pedestrianisation of Paltan Bazaar***

The project “Pedestrianisation of Paltan Bazaar”, with a cost of ₹ 13.10 crore, aimed at developing a 1.2 km stretch from Clock Tower to Darshani Gate, of which 476 meters was intended to be developed as a pedestrian walkway to provide obstruction free, safe, comfortable and continuous walking zone for pedestrians. The quality of the work carried out by contractor was deemed substandard, as highlighted in media reports and complaints filed by the residents. Specifically, instances of deteriorating and broken tiles were observed in numerous locations.

DSCL conveyed identified quality issues such as damage and depressions in the paver block tiles and manhole chambers not aligned with the road surface to the contractor through several letters, urging necessary improvements. The contractor explained (February 2023) that without hydraulic bollards, vehicular movement was

<sup>5</sup> AGM (Finance), AGM (Procurement & Contract Management), *etc.*

not adequately restricted, leading to the degradation and breakage of tiles. This matter was also in the knowledge of DSCL. Further, the traders from Paltan Bazaar, Dehradun lodged (September 2022) a complaint with the Prime Minister Office regarding the inferior quality of the work. An ensuing inquiry conducted (August 2023) by a joint investigation committee as per the direction of the District Magistrate, Dehradun revealed various deficiencies in the execution of the project. During a joint physical inspection conducted (23 December 2023), by audit with representative of the DSCL, audit also noted the same visual



deficiencies such as undulations, depressions, broken tiles, manhole chamber above the road level and broken edges of manhole chambers as highlighted earlier by the joint investigating committee.

The Government furnished no specific reply, however, Management stated that (January 2024) PMC had recommended (October 2023) deduction of ₹ 15.45 lakh from the bills of the contractor, which would be recovered from the withheld amount of the contractor.

### 5.3.1 Smart Road

Following quality control issues were observed under the project:

- i) Certain irregularities in execution of 'Smart Road Project' were pointed out by TPA<sup>6</sup>. On failure by the B&R to rectify these deficiencies, the Planning Department, Government of Uttarakhand, directed (June 2022) for recovery of ₹ 55.59 lakh from

<sup>6</sup> M/s. Quality Austria Central Asia (Pvt.) Ltd.

B&R on account of substandard work done by the contractor. Audit found that DSCL had neither made this recovery nor had it incorporated in the details of joint measurement prepared (May 2023) for adjustment of the above amount from B&R.

- ii) DSCL also pointed out (November 2023) faulty sewer work done by B&R, as the B&R had replaced the pipes without properly restoring the manhole. This resulted in choked household connections and overflows in the sewer chambers and DSCL had to undertake additional work to resolve the issue through the UJS at the cost of ₹ 53.50 lakh. Therefore, a deduction of ₹ 53.50 lakh was incorporated in the details of joint measurement to compensate the above expenditure. B&R, however, did not agree to the above deduction. Consequently, DSCL issued (November 2023) a letter to B&R, holding them fully accountable for the extra work carried out by the UJS.

During the Exit Conference (21 June 2024), the Government stated that the matter would be addressed with B&R during the final settlement of MoU.

The fact remains that an amount of ₹ 1.09 crore was pending for recovery from B&R as of June 2024.

#### 5.4 Internal Control

Internal control systems are critical frameworks within organizations, designed to safeguard assets, ensure the accuracy and reliability of financial information, promote operational efficiency, and ensure compliance with laws, regulations, and policies. When these systems are weak or inadequately implemented, they expose the organisation to significant risks. Audit highlighted the following instances of weak internal controls within DSCL, indicating systemic deficiencies in governance, oversight, and operational practices:

- **Irregular payment:** Payments made without proper authorisation or adherence to the established financial protocols reflect a lack of stringent checks and balances, increasing the risk of misappropriation as discussed in *Paragraph 3.1.2.1 and 3.1.2.6 (d)*.
- **Deployment of ineligible IT experts:** Employing personnel who do not meet the requisite qualifications compromises the quality and effectiveness of IT services as discussed in *Paragraph 3.1.2.2*.
- **Unverified payments:** Instances of unverified transactions point to gaps in the verification processes and a lack of rigorous monitoring mechanisms as discussed in *Paragraph 3.1.2.3*.
- **Inadmissible payments:** Payments made for ineligible expenses or against unauthorised claims reflect poor compliance with organizational policies and guidelines as discussed in *Paragraph 3.1.2.4*.

- **Reimbursement without supporting documents:** Approving reimbursements without proper invoices or documentation indicates inadequate review procedures and opens the door to the financial irregularities as discussed in *Paragraph 3.1.2.5 and 3.1.2.6 (c)*.
- **Undue benefits to PMC:** Providing unwarranted advantages to PMC signals potential conflicts of interest, mismanagement of contracts, or lack of contractual oversight as discussed in *Paragraph 3.1.2.6 (a) and 3.1.3*.
- **Unfruitful/Wasteful Expenditure:** Inefficient use of resources or spending on unproductive activities indicates a lack of proper planning, monitoring, and cost control measures as discussed in *Paragraph 2.4.1.6, 2.4.5.2, 2.4.7.2 and 3.1.2.6 (b)*.
- **Failure to impose penalties for delays:** Not enforcing penalties for delayed project completion undermines accountability, encourages non-performance, and could delay critical public benefits intended from such projects. The instances of non-imposition of penalty for delay in execution of projects are discussed in *Paragraph 3.3*.
- **Deployment of manpower on Contract in key posts:** Placing contractual or deputed staff in key positions may result in inefficiencies or conflicts of interest, especially if these individuals lack the authority, expertise, or long-term commitment to the organisation. The Audit observation is discussed in *Paragraph 5.2.1*.

These findings highlight a weak internal control mechanism within DSCL, reflecting the need for a comprehensive overhaul of its governance and operational frameworks.

## **5.5 Non-production of records**

Effective record keeping contributes to organisational efficiency, accountability, and compliance. Non-production of records severely limits the exercise of CAG's constitutional mandate and may result in lack of accountability by State Government functionaries. Despite the repeated requests, DSCL failed to furnish the basic records pertaining to the preparation of SCP to the Audit. Consequently, Audit was unable to examine records related to the activities such as consultation held with city residents and other stakeholders, project selection criteria, and proposal for financing the projects under the SCP.

During the Exit Conference (21 June 2024), the Government accepted the facts and assured that DSCL would provide the records to the Audit after obtaining them either from MDDA, the Municipal Corporation, or MoHUA. However, no records were provided to the Audit. Further, no status thereof was also intimated to the audit so far (October 2024).

## 5.6 Recommendations

1. *The State Government should ensure that the key posts in the sensitive wings of DSCL like procurement and finance are filled from the government officials on deputation basis instead of contractual staff.*
2. *The State Government should take concrete action against the concerned officials and contractors responsible for substandard quality of works during execution of projects.*
3. *The State Government should strengthen the internal control mechanism to ensure compliance with laws, regulations and policies.*

Dehradun  
The 07 November 2025



(SANJEEV KUMAR)  
Accountant General (Audit),  
Uttarakhand

Countersigned

New Delhi  
The 12 November 2025



(K. SANJAY MURTHY)  
Comptroller and Auditor General  
of India



# Appendices



**Appendix-1.1**  
**(Reference: Paragraph-1.7 & 2.1; Page-04 & 08)**

**Details of Projects as on 31 March 2023**

Sl. No.	Name of Project	Envisaged objectives	Area	Date of Sanction	Sanctioned financial outlay (₹ in crore)	Name of Implementing Agency	Date of contract/MoU	Scheduled date of completion	Actual Date of completion	Expenditure as March 2023 (₹ in crore)	Status/Date of Hand over
1	Doon Command and Control Centre (DICCC) including Bandwidth for DICCC Project	To establish a collaborative framework where input from different functional departments such as Transport, Police, Meteorology, Traffic etc. can be assimilated and analysed on a single platform.	Pan City	08.03.2019	307.83	DSCL	22.07.2019	21.05.2020	15.03.2022	302.68	No
2	Integrated Office Green Building	To centralize district-level offices for enhanced citizen convenience.	ABD area	16.07.2019	204.46	CPWD	01.10.2019	01.11.2021	Under progress	18.85	No
3	Smart Roads	Smart Road was conceived as a combination of appropriate road infrastructure and supporting IT components that would assist all road users including vehicle users, pedestrians, cyclists, and differently abled persons to move comfortably.	ABD area	08.03.2019	190.54	B&R and PWD	12.07.2019	01.07.2021	Under progress	119.29	No
4	City Investments to Innovate, Integrate and Sustain (CITIIS)	The project proposes to refocus towards specific interventions around schools.	Pan City	18.06.2022	58.50	PWD	November 2022	August 2023	Under progress	1.16	No
5	Electric Buses	To introduce a new public transport system to minimize pollution and give fillip to the overall program of using eco-friendly energy for transport.	Pan City	24.06.2019	41.56	DSCL	04.03.2020	03.09.2020	04.12.2022	41.57	No
6	Water supply Augmentation and Smart Meters	To replace and reorganize the water supply pipelines and install smart meters in Zone-4B of the ABD area to prevent water misuse.	ABD area	16.07.2019	32.59	DSCL	16.12.2019	16.12.2020	Under progress	24.25	No
7	Integrated Sewerage Work	To replace the main sewer network that had outlived its design period, including connectivity up to the outfall point.	ABD area	26.09.2019	28.41	B&R and UJN	10.12.2019	01.12.2020	Under progress	9.14	No
8	Smart Water Management (SCADA)	To cater the issue related to water loss, erratic distribution of water from storage reservoirs and inefficient electric motors, pumping machinery and other equipment.	Pan City	16.07.2019	53.40	DSCL	18.09.2020	17.09.2021	31.03.2023	19.13	No

**Report on Implementation of Smart Cities Mission in Dehradun**

Sl. No.	Name of Project	Envisaged objectives	Area	Date of Sanction	Sanctioned financial outlay (₹ in crore)	Name of Implementing Agency	Date of contract/ MoU	Scheduled date of completion	Actual Date of completion	Expenditure as March 2023 (₹ in crore)	Status/Date of Hand over
9	Smart Waste Vehicle	Procurement of Smart Vehicles and Smart Bins for collection of door-to-door waste.	Pan City	24.06.2019	21.28	NND & UJS	-	-		12.82	Yes May 2023
10	Rejuvenation of Parade Ground	To transform fragmented spaces into a pedestrian and dynamic transformational Zone.	ABD area	16.07.2019	20.87	DSCL and PWD	30.10.2019	30.10.2020	07.02.2023	9.73	No
11	Integrated Drainage Work	To ensure systematic and integrated drainage system and avoid flooding in ABD area.	ABD area	26.09.2019	16.27	B&R and Irrigation Department	10.12.2019	01.12.2020	Under progress	8.82	No
12	Pedestrianisation of <i>Paltan Bazaar</i>	To enhance a 1.2 km, stretch from Clock Tower (Ghanta Ghar) to Darshani Gate. Within this, 476 meters were designated for development as a pedestrian walkway with a road section of 2.5m pedestrian on both sides and 5m central spine for golf cart and limited time vehicular movement. The central 5m carriageway is designed for restricted vehicular movement, with interlocked paver block surface. The footpath of average 2.5m width on both sides maintains the same level with the road surface.	ABD area	16.07.2019	13.10	DSCL	10.12.2019	10.12.2020	10.12.2022	7.09	No
13	Modern Doon Library	To enrich the learning outcomes of students/users through diverse techniques i.e., use e-content & interactive techniques etc.	ABD area	01.10.2019	12.33	UPN	20.09.2019	15.03.2021	31.01.2023	5.75	Yes January 2023
14	Smart School	To provide schools with smart facilities like Virtual Classes / Learning Management System, Digital content /e-library etc.	ABD area	08.03.2019	6.05	DSCL	30.05.2019	29.02.2020	01.11.2020	5.91	No
15	Facade rejuvenation of <i>Platan Bazar</i>	To give a symmetrical look by regularizing the building facade and proper signage system based on local design elements.	ABD area	15.06.2022	4.79	DSCL	14.11.2022	13.05.2023	Under Progress	1.35	No
16	Water ATM	To provide safe and potable drinking water in adequate quantity and within minimum distance to all at all time and to bring about an improvement in the general quality of life in the ABD area.	Pan City	19.11.2018	1.98	DSCL	20.02.2019	19.08.2019	23.09.2021	--	No

Sl. No.	Name of Project	Envisaged objectives	Area	Date of Sanction	Sanctioned financial outlay (₹ in crore)	Name of Implementing Agency	Date of contract/ MoU	Scheduled date of completion	Actual Date of completion	Expenditure as March 2023 (₹ in crore)	Status/Date of Hand over
17	Smart Toilet	To meet the sanitation and cleanliness requirement at public places in Dehradun.	Pan City	19.11.2018	1.73	DACL	07.03.2019	06.09.2019	03.09.2022	1.74	No
18	Creche Building	To address children's rights to nutrition, health, care, learning, play, and protection while parents are engaged, and to instil confidence in mothers about their children's safety and well-being.	ABD area	16.07.2019	0.90	PWD	22.07.2021	23.04.2022	04.01.2023	0.88	Yes January 2023
19	Digitization of Collectorate and CDO Office	To procure computers, printers, and scanners for implementation of e-office in the Collectorate and Tehsil offices.	ABD area	08.09.2020	0.61	Collectorate	21.09.2020	21.10.2020	26.10.2020	0.56	Yes
20	Monumental Flag	To foster a sense of national pride, unity, and patriotism among citizens.	ABD area	13.07.2020	0.10	DACL	19.05.2020	19.08.2020	19.12.2020	0.09	No
21	Smart Poles on PPP <sup>1</sup> mode	To provide multiple services in the city e.g., Wi-Fi, Smart Warm LED luminaries, CCTV camera, Telecom Services and environmental sensors through Smart Poles.	Pan City	19.08.2019	Not Applicable	PPP	14.01.2020	13.01.2021	Under progress	Not Applicable	No
22	Citizen Engagement/ Outreach Project	To provide Citizen engagement in Dehradun through virtual interaction, dialogues and discussion.	ABD area	13.07.2020	1.00	DACL	-	-	-	0.58	-

<sup>1</sup> The project was planned to be executed as PPP project; hence, no cost was sanctioned for it.

Appendix-2.1

(Reference: Paragraph-2.3, 2.4.2, 2.4.5.1, 2.4.6, 2.4.8, 2.4.9; Page 10, 17, 21, 22, 25, 26)

Project wise detail of Smart components

Sl. No.	Name of Project	Proposed components under the project	Status of execution as of December 2023	Remarks
1	Doon Integrated Command and Control Centre	Traffic lights	Installed	Operational availability of end devices (except surveillance cameras) ranged from 28 to 73 per cent
		Surveillance Cameras	Installed	
		Red Light Violation Detection	Installed	
		Automatic Number Plate Reader	Installed	
		Smart traffic sensors (A & B)	Installed	
		Speed Violation Detection (SVD)	Installed	
		Variable Message Display boards	Installed	
		Emergency Call Box (ECB)	Installed	
		Public Announcement System	Installed	
		Environmental sensors	Installed	
2	Electric Bus	Eco-friendly energy for transport	Enabled	Functional
3	Rejuvenation of Parade Ground	Rainwater harvesting	Executed	Functional
4	Smart Water Management (SCADA)	Flow Meter	Installed	Functional
		Pressure Transmitters	Installed	Functional
		Automated Chlorinators	Installed	Functional
		Valve Actuators	Installed	Functional
		Quality Monitors	Installed	Functional
		Level Sensors	Installed	Functional
		Coin Operated Water Dispensing System	Executed	Functional
6	Smart Waste Vehicle	Sewer cum Jetting Machine	Executed	Functional
		Jetting Garbing and Rodding Machine	Executed	Functional
		Super Sucker Machine with dump tank	Executed	Functional
		Drain Cleaning Machine,	Executed	Functional
		Road Sweeping Machine	Executed	Functional
		e-carts	Executed	Non-functional
7	Modern Doon Library	e-content	Not Installed	
		Intelligence Door	Not Installed	
		Wi-fi	Installed	Functional
		CCTV	Installed	Functional
		RFID tags/system	Installed	Partially functional
		Anti-theft check	Installed	Functional
		Computer	Installed	Functional
		Smart screen	Installed	Functional

Sl. No.	Name of Project	Proposed components under the project	Status of execution as of December 2023	Remarks
8	Smart toilet	Bio-Metric Attendance System	Installed	Non-functional for want of license key
		Sensor based Taps	Executed	Partially functional
		Auto flush urinals system	Executed	Partially functional
		LED indications	Not- executed	
		Voice Guidance	Not- executed	
		Display boards	Not- executed	
		GPRS Connectivity	Not- executed	
9	Water supply Augmentation and Smart Meters	Electrical Inverter	Not- executed	
		Roof top solar	Not- executed	
10	Smart Poles on PPP mode	Replacement of Rising Mains & Distribution Mains and installation of Tube-well	Executed	
		Installation of Smart Meter	Partially Installed	Work under progress
		Wi-fi	Not Installed	
		Warm LED Street light	Not Installed	
		IP based PTZ Camera (CCTV)	Not Installed	
		Environmental Monitoring Sensors	Not Installed	
		Digital Billboard	Not Installed	
		Telecom services	Partially	
		Interactive boards	Installed	
		Computer lab	Installed	
11	Smart School	Projectors	Installed	
		e-Content	Installed	
		CCTVs	Installed	
		Biometric Attendance	Installed	
		Uniform cross section of Carriageway	Deficiently executed	
		Dedicated pedestrian pathway	Deficiently executed	
		Electric vehicles charging stations	Not executed	
		Pedestrian crossing in tabletop type crossing	Not executed	
		Smart LED lighting with sensors	Not executed	
		Designated parking lots with sensors	Not executed	
12	Smart Roads	Smart Bus Stop	Completed	
		Multi utility Duct/Duct Bank	Completed	
		CCTV camera		
		Demarcated School bus/Van Parking		
		Bollards		
13	City Investments to Innovate, Integrate and Sustain (CITIIS)		Under progress	Work under progress

**Report on Implementation of Smart Cities Mission in Dehradun**

Sl. No.	Name of Project	Proposed components under the project	Status of execution as of December 2023	Remarks
14	Pedestrianisation of <i>Paltan Bazaar</i>	Speed calming measures	Not Executed as per provision	
		Pathway and pavements		
		Multi utility Duct		
		2.5-meter pedestrian on both sides and 5-meter central spine for golf cart and limited time vehicular movement		
		Retractable hydraulic bollards		
		Benches		
		E-Card with charging stations		
		Kiosk garden		
		Horticulture work		
		Modular FRP Toilets		
15	Integrated Office Complex Green Building	CCTV cameras	Not Installed	
		Smart poles	Not Installed	
		Environmentally sustainable building	Work under progress	
16	Digitization of Collectorate and CDO Office	Computer	Installed	
		Printer	Installed	
		Scanner	Installed	
17	Façade rejuvenation of Platan Bazar	Regularisation of Buildings Façade and proper Signage System based on local design elements.	Executed	
18	Integrated Drainage Work	Establishment of Systematic and Integrated Drainage System	Under progress	
19	Integrated Sewerage Work	Replacement of Main Sewer Network and Connectivity up to the outfall point situated outside the ABD area	Under progress	
20	Citizen Engagement/ Outreach Project	Citizen engagement in Dehradun through virtual interaction, dialogues and discussion	Carried out	
		Activity cum Lunch/Meal Area	Provided	
		Play Area	Provided	
		Study Room	Provided	
		Sleeping Room	Provided	
21	Creche Building	Day-care/Creche office	Provided	
		Kitchen	Provided	
		Installation of 30.5-meter-tall Monumental National Flag	Installed	
22	Monumental Flag	Installation of 30.5-meter-tall Monumental National Flag		

**Appendix-2.2**  
**(Reference: Paragraph-2.4.1; Page 11)**

**Total expenditure incurred on DICCC project**

Sl. No.	Description	2019-20	2020-21	2021-22	2022-23	2023-24 (Upto 12/2023)	Total Amount
1	CAPEX (M/s HPE)	62.96	81.30	76.66	0.00	2.20	223.12
2	OPEX (M/s HPE)	0.00	0.00	0.00	4.56	10.11	14.67
<b>Total</b>		<b>62.96</b>	<b>81.30</b>	<b>76.66</b>	<b>4.56</b>	<b>12.31</b>	<b>237.79</b>
<b>Other expenses related to DICCC project</b>							
3	M/s HPE Manpower-DICCC	0.00	0.00	0.34	0.00	0.00	0.34
4	Electricity	0.00	0.23	0.36	0.66	0.28	1.53
5	Telephone	0.00	0.01	0.01	0.02	0.02	0.06
6	Bandwidth (BSNL)	0.00	0.00	5.62	8.28	2.86	16.76
7	Third Party Auditor (M/s Bharat Electronics)	0.00	0.00	1.73	0.00	0.23	1.96
8	Zebra Crossing Line	0.00	0.00	0.00	0.02	0.00	0.02
<b>Total</b>		<b>0.00</b>	<b>0.24</b>	<b>8.06</b>	<b>8.98</b>	<b>3.39</b>	<b>20.67</b>
<b>Grand Total</b>		<b>62.96</b>	<b>81.54</b>	<b>84.72</b>	<b>13.54</b>	<b>15.70</b>	<b>258.46</b>

Source: Information provided by DSCL.

Appendix-2.3

(Reference: Paragraph-2.4.1.7; Page 16)

Cost estimate for dismantling and re-installation of IT Equipment at 16 traffic junctions of Smart Road

(Amount in ₹)

Sl. No.	Locations	Estimation for Removal	Estimation for Re-installation
1	Survey Chowk	97,687	13,85,750
2	Nany's Bakery	33,375	6,39,625
3	Dwarika Chowk	29,500	6,90,375
4	Yamuna Colony	11,875	4,28,125
5	Bahal Chowk	0	4,45,125
6	Araghar Chowk	33,812	8,41,875
7	Globe Chowk	0	3,33,375
8	Near CMI Chowk	42,125	6,70,187
9	Race Course Chowk	20,000	2,10,500
10	City Heart Centre, EC Road	40,250	3,01,000
11	Dilaram Chowk	10,875	1,89,437
12	Chakrata Road Tagore Villa	18,750	66,375
13	Mohini Road Cut EC Road	19,000	68,125
14	Bindal Chowk	0	1,97,375
15	Kishan Nagar Chowk	0	84,375
16	Clock Tower	0	1,20,250
<b>Total</b>		<b>3,57,249</b>	<b>66,71,874</b>
<b>Grand Total</b>		<b>70,29,123</b>	

**Appendix-2.4**  
(Reference: Paragraph-2.4.4; Page 19)

Average occupancy in e-buses on each trip during the month of July 2023

Name of Route	Number of Trip	Fare	Revenue earned during the month	Revenue earned each day	Revenue earned in each trip	Occupancy in each trip (Number of passenger)
ISBT-Airport	38	200	6,37,325	20,558.87	541.02	2.71 (3)
ISBT-Rajpur	68	30 <sup>2</sup>	8,42,085	27,164.03	399.47	13.32 (13)
ISBT-Sahstradhara	46	35 <sup>3</sup>	6,39,430	20,626.77	448.41	12.81 (13)
ISBT-Raipur Maldevta	49	50 <sup>4</sup>	9,27,510	29,919.68	610.61	12.21 (12)
ISBT-Sahaspur (Langha Road)	46	50	9,39,705	30,313.06	658.98	13.18 (13)

**Appendix-2.5**  
(Reference: Paragraph -2.4.5.2; Page 21)

Details of unused material under Smart Road Project

Sl. No.	Items	Handed over to PIU, PWD		Utilized Quantity		Balance Quantity	
		Quantity	Cost (in ₹)	Quantity	Cost (in ₹)	Quantity	Cost (in ₹)
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6 (4/3*5)</b>	<b>7(3-5)</b>	<b>8(4/3*7)</b>
1	Manhole Section	91	45,09,581	4	1,98,223	87	43,11,358
2	1 M Load bearing Section	111	38,94,818	27	9,47,388	84	29,47,430
3	1.60 M Non load bearing Section	585	2,60,49,545	20	8,90,583	565	2,51,58,962
		<b>Total cost of remaining items</b>				<b>3,24,17,750</b>	

<sup>2</sup> Fare is based on the operative km 13 to km 17.

<sup>3</sup> Fare is based on the operative km 17 to km 21.

<sup>4</sup> Fare is based on the operative km 30 to km 35.

Appendix-3.1  
(Reference: Paragraph-3.2.1; Page 45)

Details of overhead hindrances in the alignment of Smart Road

Sl. No.	Hindrances	Name of line Departments	Number of Utilities			
			Rajpur Road	Chakrata Road	EC Road	Haridwar Road
1	Electric Pole	UPCL	84	138	191	63
2	Hoarding & Bus Shelter	Nagar Nigam	30	39	14	0
3	Trees	Forest	44	27	30	15
4	Transformer	UPCL	25	16	20	10
<b>Total</b>			<b>183</b>	<b>220</b>	<b>255</b>	<b>88</b>

Appendix-3.2  
(Reference: Paragraph-3.3; Page 46)

Details of imposition of penalty

Sl. No.	Name of Project	Time Overrun as on December, 2023 (months)	Provision of penalty	Status of penalty imposed
1	Smart Road	30	Yes	Not imposed as DSCL failed to provide hindrance free work front to B&R.
2	CITIIS	21	Yes	Not imposed
3	Electric buses	26	Yes	Not imposed
4	Water Supply Augmentation and Smart Metering	36	Yes	Not imposed
5	Rejuvenation of Parade Ground	38	Yes	Partially imposed <sup>5</sup>
6	Modern Doon Library	19	Yes	Imposed but not recovered
7	Pedestrianisation of <i>Paltan Bazaar</i>	24	Yes	Imposed but partially recovered
8	Water ATM	24	Yes	Not imposed

<sup>5</sup> A penalty was imposed for the delay in executing the work only; however, the penalty for the value of the incomplete work was not enforced, as detailed in Case Study-1.

**Appendix-3.3**  
*(Reference: Paragraph-3.5; Page 49)*

**Details of cost escalation under Smart Road Project**

Sl. No	Description of Work / Item(s)	Units	Quantity as per old DPR for all four roads <sup>6</sup>	Unit rate as per old DPR	Unit rate as per new DPR	Difference in rates	Quantity as per new DPR for all four roads	(Amount in ₹)		
								3	4	5
<b>Footpath &amp; KC Drain</b>										
1	Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days.	Cum	41.00	4,109.50	5,036.70	927.20	2,722.67		25,24,459.62	
2	Providing and laying tactile tile (for vision impaired persons as per standards) of size 300 x 300 x 9.8 mm having with water absorption less than 0.5% and conforming to IS:15622 of approved make in all colours and shades in for outdoor floors such as footpath, court yard, multi modals location <i>etc.</i> , laid on 20mm thick base of cement mortar 1:4 (1 cement: 4 coarse sand) in all shapes & patterns including grouting	Sqm	12,073.00	1,450.45	1,933.75	483.30	4,042.20		19,53,595.26	
<b>Pavement Work</b>										
3	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well-prepared surface and compacting with vibratory roller to achieve the desired density.	Cum	10,522.00	2,593.10	3,203.10	610.00	9,036.90		55,12,509.00	
4	Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road	Sqm	1,03,944.00	22.80	32.30	9.50	71,460.85		6,78,878.08	

<sup>6</sup> Rajpur Road, Haridwar Road, EC Road and Chakrata Road.

**Report on Implementation of Smart Cities Mission in Dehradun**

Sl. No	Description of Work / Item(s)	Units	Quantity as per old DPR for all four roads <sup>6</sup>	Unit rate as per old DPR	Unit rate as per new DPR	Difference in rates	Quantity as per new DPR for all four roads	Cost escalation
	surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means.							
5	Providing and laying dense bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5% by weight of total mix of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 507 complete in all respects. Grading I (40 mm nominal size)	Cum	10,395.00	7,241.20	9,688.50	2,447.30	7,789.55	1,90,63,365.72
6	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sqm	1,31,576.00	8.00	10.70	2.70	2,41,050.98	6,50,837.65
7	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 509 complete in all respects. Grading-II	Cum	4,747.00	8,283.40	11,254.90	2,971.50	5,350.08	1,58,97,762.72
<b>Junction Improvement, Road Painting &amp; Road Signages</b>								
8	Providing and laying 25 mm thick mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including	Sqm	37,109.00	501.30	688.00	186.70	20,850.00	38,92,695.00

Sl. No	Description of Work / Item(s)	Units	Quantity as per old DPR for all four roads <sup>6</sup>	Unit rate as per old DPR	Unit rate as per new DPR	Difference in rates	Quantity as per new DPR for all four roads	Cost escalation
9	providing antiskid surface with bitumen pre-coated fine-grained hard stone chipping of 13.2 mm nominal size at the rate of 0.005 cum per 10 sqm and at an approximate spacing of 10 cm centre to centre in both directions, pressed into surface when the temperature of surfaces not less than 1000 C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 515.							
10	Truss and vertical Support Providing and fixing of Standard Metal Delineator.	Tonne Nos.	20.00 13,965.00	80,163.70 512.90	96,819.20 1,225.20	16,655.50 712.30	144.00 1,200.00	23,98,392.00 8,54,760.00
<b>Electrical Work</b>								
11	External Lighting Feeder Pillar: Design, manufacture, supplying, fixing, testing & commissioning of outdoor wall/ floor mounted cubicle type CCMS feeder pillar of suitable size (not less than 600Wx1200Hx450D-CCMS) fabricated from 2.0 mm (14 SWG) hot dip galvanized GI sheet steel with canopy on top, double door with locking arrangement (IP-54), powder coated with epoxy paint of approved shade, duly fixed on MS angle 50 x 6 frame with 900 long legs, out of which 450 duly grouted in cement concrete+B17 1:2:4 (1 cement: 2 sand: 4 stone aggregate 20mm) and having following equipment/ accessories mounted inside the cubical panel i/c connection, inter connection with aluminum thimbles, earthing with two nos. earth studs etc complete as reqd.	Job		1,20,000	1,43,016.30	23,016.30	12.00	2,76,195.60
12	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. Direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required. 63 mm dia (OD-63 mm & ID-51 mm nominal).	Meter	5,750.00	135.00	209.00	74.00	14,251.00	10,54,574.00
<b>Water Supply Work</b>								
13	D.I. pipe conforming to IS:8329/2000 Providing of all materials, carting from site store to site of work, lowering into trenches with							

**Report on Implementation of Smart Cities Mission in Dehradun**

Sl. No	Description of Work / Item(s)	Units	Quantity as per old DPR for all four roads <sup>6</sup>	Unit rate as per old DPR	Unit rate as per new DPR	Difference in rates	Quantity as per new DPR for all four roads	Cost escalation
	true to alignment, Laying & Jointing of full-length S&S Centrifugally Cast (Spun) Ductile Iron Pipes including supply of 'EPDM' rubber gaskets conforming to IS:5382-1985 with testing of pipe line complete. D.I. Pipe S&S K-7:							
	100 mm dia pipe	Meter	3,597.00	900.00	1,150.00	250.00	1,827.00	4,56,750.00
	150 mm dia pipe.	Meter	1,065.00	1,270.00	1,620.00	350.00	969.00	3,39,150.00
	250 mm dia pipe	Meter	307.00	2,170.00	2,630.00	460.00	276.00	1,26,960.00
14	Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS: 9523-2001, Up to 600 mm dia.	Per Qtl.	71.11	14,040.00	22,620.00	8,580.00	170.34	14,61,517.20
15	Supply, fixing and installation of multijet AMR domestic water meters pre-equipped with RF based automated meter reading facility, with nuts, bolts and necessary accessories conforming to IS 779:1994 / other ISO 4064 standard with 5 years warranty. DN 15mm as per technical specification.	Nos.	828.00	5,800.00	7,200.00	1,400.00	630.00	8,82,000.00
16	Supply of all labour, material required for restoring of existing house connection which might be damage during excavation and also shifting all existing connection to new water supply system from existing water supply system complete as per unit estimate and directed by Engineer in-charge. 15 mm size water connections.	Nos.	828.00	2,501.95	3,153.20	651.25	630.00	4,10,287.50
<b>Drainage Work</b>								
17	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m.	Cum	13,519.00	125.25	219.65	94.40	6,146.40	5,80,220.16
18	Removal of earth By Mechanical Transport including loading, unloading and stacking up to 10 km Distance.	Cum	25,624.00	203.42	277.83	74.41	12,804.80	9,52,805.17
19	Plain cement concrete (PCC Grade M15) in open foundation completes as per drawing and technical specifications.	Cum	4,239.00	4,754.00	5,788.30	1,034.30	1,505.01	15,56,631.84
20	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced	Cum	7,360.32	6,515.95	7,997.30	1,481.35	6,193.65	91,74,963.43

Sl. No	Description of Work / Item(s)	Units	Quantity as per old DPR for all four roads <sup>6</sup>	Unit rate as per old DPR	Unit rate as per new DPR	Difference in rates	Quantity as per new DPR for all four roads	Cost escalation
	cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centring, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.							
21	Supplying, fitting and placing un-coated HYSD bar reinforcement in foundation complete as per drawing and technical specifications.	Tonne	1,918.00	60,763.80	84,702.50	23,938.70	708.86	1,69,69,186.88
	<b>Total</b>							<b>8,76,68,496.81</b>
	<b>Add 18% GST</b>							<b>1,57,80,329.43</b>
	<b>Grand Total</b>							<b>10,34,48,826.24</b>

Appendix-4.1  
(Reference: Paragraph-4.1; Page 51)

Details of release of Central share and matching share of State

Date of release of Central Share to State	Amount released by Centre	Date of Release of Central Share by State to SPV	Amount of Central share released by State to SPV	Delay in release of Central Share (in days)	Date(s) of release of matching share to SPV by State	Amount (s) of State matching share released to SPV	Delay in release of State matching share
01.09.2015	2.00	17.05.2016	0.67	252	13.02.2019	2.00	1254
-	-	23.05.2016	1.33	258	-	-	-
30.03.2018	18.00	18.05.2018	18.00	42	19.03.2018	3.00	Paid in advance
27.06.2018	2.00	13.02.2019	2.00	224	11.06.2018	15.00	66
20.08.2018	34.00	13.02.2019	34.00	170	28.03.2019	2.00	267
21.12.2018	4.00	21.05.2019	4.00	144	28.03.2019	34.00	213
31.07.2019	70.00	16.10.2019	70.00	70	01.10.2019	4.00	277
03.10.2019	66.00	11.02.2020	35.00	124	11.12.2019	70.00	126
		07.10.2020	31.00	363	12.04.2021	66.00	550
19.10.2020	5.00	11.11.2020	5.00	16	08.10.2020	3.00	Paid in advance
					11.11.2020	2.00	16
29.10.2020	46.50	04.02.2021	46.50	91	12.04.2021	12.75	158
					14.10.2021	33.75	343
27.06.2022	46.50	25.07.2022	46.50	21	06.12.2022	46.50	155
30.06.2022	2.50	25.07.2022	2.50	18	30.09.2021	2.50	Paid in advance
08.12.2022	49.00	17.01.2023	49.00	33	17.01.2023	46.00	33
					20.03.2023	3.00	95
17.02.2023	49.00	16.03.2023	46.50	20	17.05.2023	46.50	82
		15.05.2023	2.50	80	15.05.2023	2.50	80

**Appendix-4.2**  
**(Reference: Paragraph-4.5; Page 55)**

**Details of interest on mobilisation advance**

<b>Date</b>	<b>Mobilisation Advance paid</b>	<b>Mobilisation Advance recovered</b>	<b>Balance</b>	<b>Days</b>	<b>Amount of Interest</b>
16.01.2020	3,64,00,000	0	3,64,00,000	265	26,42,739.73
07.10.2020		69,83,724	2,94,16,276	169	13,62,013.88
25.03.2021		18,41,088	2,75,75,188	114	8,61,252.45
17.07.2021		27,61,658	2,48,13,530	241	16,38,372.80
15.03.2022		21,26,385	2,26,87,145	367	22,81,145.81
17.03.2023		1,42,31,158	84,55,987	69	1,59,852.90
25.05.2023		12,18,821	72,37,166	84	1,66,553.96
17.08.2023		45,86,370	26,50,796	-	-
<b>Total</b>		<b>3,37,49,204</b>			<b>91,11,931.53</b>
		<b>Recovered</b>			<b>10,00,000.00</b>
		<b>Balance to be recovered</b>			<b>81,11,931.53</b>



# Glossary



## Glossary

Sl. No.	Abbreviation	Expanded Form
1.	A&OE	Administration & Office Expenses
2.	ABD	Area Based Development
3.	ACEO	Assistant Chief Executive Officer
4.	AGM	Assistant General Manager
5.	AQMS	Air Quality Monitoring Stations
6.	AMR	Automatic Meter Reading
7.	B&R	Bridge & Roof Company India Limited
8.	BoQ	Bill of Quantities
9.	BPS	Booster Pumping Station
10.	CAG	Comptroller and Auditor General of India
11.	CAPEX	Capital Expenditure
12.	CAQMS	Continuous Air Quality Monitoring Station
13.	CCTV	Closed Circuit Tele Vision
14.	CDO	Chief Development Officer
15.	CEO	Chief Executive Officer
16.	CITIIS	City Investments to Innovate, Integrate and Sustain
17.	CPSU	Central Public Sector Undertaking
18.	CPWD	Central Public Works Department
19.	CSS	Centrally Sponsored Scheme
20.	CV	Curriculum Vitae
21.	DICCC	Doon Integrated Command and Control Centre
22.	DPR	Detailed Project Report
23.	DRC	Dispute Resolution Committee
24.	DSCL	Dehradun Smart City limited
25.	FC	Finance Controller
26.	GFR	General Financial Rules
27.	GM	General Manager
28.	GoI	Government of India
29.	GoU	Government of Uttarakhand
30.	GPS	Global Positioning System
31.	Green Building	Integrated Office Complex Green Building
32.	GST	Goods and Services Tax
33.	HPE	Hewlett Packard Enterprise India Private Limited
34.	HPSC	High Power Steering Committee
35.	IA	Implementing Agency
36.	IAS	Indian Administrative Service
37.	ICT	Information and Communication Technology
38.	IDTF	Inter-departmental Task Force
39.	ISBT	Inter-State Bus Terminal
40.	ITDA	Information Technology Development Agency
41.	ITMS	Intelligent Traffic Management System
42.	MA	Mobilisation Advance
43.	MDDA	Mussoorie Dehradun Development Authority
44.	MoHUA	Ministry of Housing and Urban Affairs
45.	MoU	Memorandum of Understanding

<b>Sl. No.</b>	<b>Abbreviation</b>	<b>Expanded Form</b>
46.	MoUD	Ministry of Urban Development
47.	MSI	Master System Integrator
48.	MUD	Multi Utility Duck
49.	NND	Nagar Nigam Dehradun
50.	NOC	No Objection Certificate
51.	NPCC	National Projects Construction Corporation Limited
52.	O&M	Operation & Maintenance
53.	OPEX	Operational Expenditure
54.	OFC	Optical Fiber Cable
55.	OHT	Overhead Tank
56.	PCS	Provincial Civil Services
57.	PIU	Project Implementing Unit
58.	PMC	Project Management Consultant
59.	PPP	Public Private Partnership
60.	PWD	Public Works Department. Uttarakhand
61.	QR	Quick Response
62.	RC	Registration Certificate
63.	RFID	Radio Frequency Identification
64.	SCADA	Supervisory Control and Data Acquisition
65.	SCP	Smart City Proposal
66.	SCM	Smart Cities Mission
67.	SFS	State Finance Services
68.	SG	State Government
69.	SPV	Special Purpose Vehicle
70.	SNA	Single Nodal Account
71.	SWM	Solid Waste Management
72.	SWV	Smart Waste Vehicle
73.	TPA	Third-Party Agency
74.	TW	Tube well
75.	UDD	Urban Development Department
76.	UJN	Uttarakhand Jal Nigam
77.	UJS	Uttarakhand Jal Sansthan
78.	UKPCB	Uttarakhand Pollution Control Board
79.	ULB	Urban Local Body
80.	UPCL	Uttarakhand Power Corporation Limited
81.	UREDA	Uttarakhand Renewable Energy Development Agency
82.	UTC	Uttarakhand Transport Corporation
83.	VMD	Variable Message Display



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