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SUB-PROJECT COMPLETION REPORT

COMPONENT – I

RECONSTRUCTION & STRENGTHENING OF CRITICAL INFRASTRUCTURE

VOLUME – II

February 2026

Technical Assistance & Quality Audit Consultants

COMPONENT – II

VOLUME – II

Total Number of Sub-projects: 05

S.No.	Name of Sub-projects	Status
1.	Construction of Science Block at Amar Singh College, Srinagar	Physically & financially complete
2.	Construction of Additional class room block at Government college for Women, M.A. Road Srinagar	Physically & financially complete
3.	Construction of Humanities Block at GDC, Bemina. Construction of Staff rooms come Meeting Hall Block at GDC Bemina	Physically complete & financially incomplete
4.	Construction of Additional class room Block at GDC, Bijbehara	Physically & financially complete
5.	Construction of Administrative Block at GDC for Women, Anantnag	Physically & financially complete

VOLUME-II

CONSTRUCTION OF HIGHER EDUCATION BUILDINGS IN THE KASHMIR DIVISION UNDER JTFRP

Contents

SUB-PROJECT COMPLETION REPORT - JTFRP KASHMIR DIVISION

PMU JTFRP KASHMIR

1. Introduction

Project Background

In September 2014, Jammu & Kashmir experienced torrential monsoon rains in the region causing major flooding & landslides. The continuous spell of rains from September 2-6, 2014 caused Jhelum and Chenab Rivers as well as many other streams/tributaries to flow above the danger mark. The Jhelum River also breached its banks flooding many low-lying areas in Kashmir, including

g the capital. In many districts, the rainfall exceeded the normal by over 600%. The Indian Meteorological Department (IMD) records precipitation above 244.4 mm as extremely heavy rainfall and J&K received 558mm of rain in the June – September period as against the normal 477.4 mm. For example, the district of Qazigund recorded over 550 mm of rainfall in 6 days as against a historic normal of 6.2 mm over the same period.

Due to unprecedented heavy rainfall the catchment areas particularly the low-lying areas were flooded for more than two weeks. Some areas in urban Srinagar stayed flooded for 28 days. Water levels were as high as 27 feet in many parts of Srinagar. The areas from the main tributaries of river Jhelum vis-à-vis Brenginallah, Vishavnallah, Lidernallah and Sandrannallah started overflowing due to the heavy rainfall causing water levels in Jhelum to rise. Subsequently, the discharge of the river Suran was 200 thousand cusecs as against an average of 50 thousand cusecs. With the excessive discharge of water, the river Suran affected the basin areas and also took a different course at various locations causing damages to the surrounding villages in the catchment area. Water levels also increased in the rivers of Chenab and Tawi, both of which were flowing above normal levels. Due to the rivers overflowing nearly 20 districts of the State were impacted.

A Joint team led by the Department of Economic Affairs (DEA), GoI, with representation from the World Bank visited J&K on October 21, 2014. Subsequently, GoI has sent a request to the World Bank on January 5, 2015 to field a joint Rapid Damage and needs Assessment (RDNA) Mission within the State. In response, a mission of the World Bank visited the State during February 1-6, 2015 in order to produce a rapid multi-sectored assessment report of the damages and needs. The RDNA estimates the total damages and loss caused by floods at about INR 211.975 Million, most of it to housing, livelihoods; roads and bridges which combined represented more than 70% of the damages in terms of value. Public service infrastructure and equipment of hospitals and education centers were also severely damaged and were still not fully operational.

The primary focus of the project "Jhelum & Tawi Flood Recovery Project" is on restoring critical infrastructure using international best practice of resilient infrastructure. Given the region's vulnerability to both flood and earthquakes, the infrastructure will be designed with upgraded resilient feature, and will include contingency planning for future disaster events. Therefore, a study followed by detailed reports on flood management aims at both restoring essential services disrupted by the floods and improving the design standards and practices resilience.

The Government of India has received a loan from the World Bank towards the cost of Jhelum &Tawi Flood Recovery Project (JTFRP) for Government of Jammu and Kashmir. The Disaster Management, Relief & Rehabilitation Department, Government of J&K has been appointed as the implementing agency. One Project Management Unit (PMU) has been set up under this implementing agency which is responsible for overall project management, coordination and reporting.

Based on the Rapid Damage Needs Assessment (RDNA): Results, restoration works underway and discussion with the GOJ&K, the project will focus on resorting critical infrastructure using international best practice on resilient infrastructure. Given the state's vulnerability to both floods and earthquakes, the infrastructure will be designed with upgraded resilient features and will include contingency planning for further disaster events. Therefore, the project aims at both restoring essential services disrupted by the floods and improving the design standard and practices in the state to increase resilience.

Project Development Objective: The Project Development Objective (PDO) is to support the recovery and increase disaster resilience in targeted areas of the state and increase the capacity of the state entities to respond promptly and effectively to an eligible crisis or emergency.

Project Components:

The project is comprised of the following seven components:

1. **Reconstruction and strengthening of critical infrastructure**
2. Reconstruction of roads and bridges.
3. Restoration of urban flood management infrastructure
4. Restoration and strengthening of livelihoods
5. Strengthening disaster risk management capacity
6. Contingent Emergency Response
7. Implementation Support

Total Amount: US$ 250 Million.

Component I – Reconstruction and Strengthening of Critical Infrastructure

The objective of this component was to support the reconstruction and restoration of damaged public buildings, including hospitals, schools, higher and technical education institutions, fire stations, and selected block and district offices, as well as other important public facilities. The component covered both the restoration of partially damaged structures and the reconstruction of fully damaged buildings, along with the provision of necessary equipment and furniture.

It financed the replacement of infrastructure and equipment damaged by the disaster, while also upgrading existing structures to improve their resilience. Detailed assessments were conducted to evaluate structural safety and identify reconstruction requirements.

In hospitals, reconstruction focused on replacing damaged specialized medical equipment and installing heavy equipment on upper floors. Structural systems were strengthened to safely support the additional loads.

The component also supported the reconstruction of damaged higher and technical education buildings, fire stations, and other public buildings, including the procurement of equipment and furniture.

VOLUME - II: Higher Education Buildings Executed by PWD R&B (Kashmir)

Under this component, 05 Higher Education Buildings for colleges were constructed under the supervision of PWD (R&B) Kashmir, acting as the Project Implementation Unit (PIU). The buildings were identified by PWD (R&B) and approved by the World Bank under the JTFRP (J&K). All five buildings were constructed within the premises of their respective colleges; therefore, no issues related to land acquisition or local disputes were encountered.

2. Executive Summary

Objective: The objective of this subproject was to effectively restore and reconstruct damaged Higher education buildings while integrating the resilient features in construction design. The approach not only focuses on repairing and rebuilding facilities to ensure safety and resilience against future disasters but also enhances existing structures to create engaging educational environments. The project aims to foster inclusive education for all students, addressing diverse learning needs and promoting a supportive atmosphere. By transforming traditional classrooms into dynamic spaces, we strive to encourage active participation, creativity, and collaboration among students. Ultimately, the goal is to establish student-friendly learning environments that empower every student to thrive academically and socially, ensuring that education is accessible and enriching for all.

The project aimed to promote inclusive education by addressing diverse learning needs and providing a supportive and student-friendly atmosphere. By upgrading traditional classrooms into more engaging and functional spaces, the subproject

encouraged active participation, creativity, and collaboration. Overall, the goal was to develop safe, resilient, and inclusive educational facilities that support students' academic and social development.

Summary of Achievement: The subprojects have successfully achieved their objective of restoring and reconstructing five higher education (college) buildings, implemented by the Public Works Department (R&B) Kashmir as the Project Implementation Unit (PIU).

All construction activities were completed within the approved budget and the sanctioned extension of time. Each college building has been restored in accordance with safety standards and is now capable of providing a safe and conducive learning environment for students.

The completion of these buildings represents a significant improvement in educational infrastructure and resilience in the region, ensuring access to safe, inclusive, and functional learning spaces. This achievement reflects effective coordination among stakeholders and adherence to quality standards, supporting a positive educational environment that meets the diverse needs of students.

2.1 Introduction & Background

The higher education building subprojects implemented under the Component I focused on restoring, rehabilitating, and upgrading critical college infrastructure across Jammu & Kashmir. These interventions aimed to improve structural safety, functionality, and resilience of educational buildings affected by floods.

The works addressed key issues such as structural damage, inadequate load-bearing capacity, outdated facilities, and limited disaster resilience. Through improved design standards and modern construction practices, the subprojects under JTFRP helped restore safe and durable college buildings capable of withstanding future hazards.

The upgraded college buildings are expected to enhance the quality of higher education by providing safe, inclusive, and conducive learning environments. They support better academic activities, student engagement, and access to modern educational facilities.

These college buildings serve as important educational hubs, connecting students and faculty to essential academic services and resources. By strengthening higher education infrastructure, the subprojects contribute to human capital development, social inclusion, and long-term socio-economic growth in Jammu & Kashmir.

The higher education buildings were adversely affected by multiple factors, including the severe 2014 floods, repeated water ingress, poor drainage, aging structures, and prolonged lack of timely maintenance. Many college buildings showed structural distress due to corrosion, moisture damage, weakened foundations, and deterioration caused by age and environmental exposure. In several cases, delayed repairs and inadequate inspections had allowed damage to worsen, resulting in unsafe and functionally deficient academic spaces.

Several building components, such as slabs, columns, roofs, and service systems, had exceeded their design life and were no longer adequate to support modern academic requirements, increased student strength, and heavier service loads. Harsh weather conditions and persistent drainage issues further accelerated deterioration.

To address these challenges, the subprojects prioritized the restoration and upgrading of affected college buildings to improve safety, durability, and disaster resilience. The interventions included comprehensive structural repairs, strengthening or replacement of damaged elements, improved drainage systems, and adoption of modern engineering and seismic standards to ensure long-term performance.

Since many of the buildings were located in flood-prone areas, the design phase incorporated key resilience measures such as strengthening foundations, improving plinth protection, enhancing waterproofing, and using flood and corrosion-resistant materials. These measures were aimed at reducing future damage and ensuring structural stability during extreme events.

Many of the college buildings were constructed decades ago and had undergone multiple ad hoc repairs, leading to inconsistent structural details and materials. The subprojects addressed these issues through systematic rehabilitation, uniform design standards, and improved construction quality. Additional measures included upgrading building services, improving access and safety features, and providing provisions for regular maintenance and inspection.

Overall, the project focused on the comprehensive restoration and enhancement of higher education infrastructure in the region. The upgraded college buildings now offer safe, resilient, and student-friendly learning environments, support uninterrupted academic activities, and contribute to long-term educational development. These improvements will enhance the quality of education and positively impact the social and economic well-being of the region.

This subproject focused on the construction of 05 college buildings. The initiative was managed by the Public Works Department (R&B) of Kashmir, acting as the Project Implementation Unit (PIU). The selection of these colleges was carried out by the PWD (R&B), with subsequent approval from the World Bank as part of the Jhelum and Tawi Flood Recovery Project (JTFRP).

This subproject represents a significant step towards enhancing educational infrastructure in the region, addressing the urgent need for safe and accessible learning environments following recent flood events.

List of the Completed Higher Education Building Sub-Projects under Component-I of JTFRP in Kashmir Region

S.No.	Project Type	Sub-projects	Plinth Area (m^2)	Design Consultants	Contractor	District
1.	IRC Mode	Construction of Science Block at Amar Singh College, Srinagar	642	CCDG Adept Consultants Pvt Ltd	M/s Zahoor and co.	Srinagar, J&K
2.	IRC Mode	Construction of Additional class room block at Government college for Women M.A. Road Srinagar	590	CCDG Adept Consultants Pvt Ltd	M/s Ghulam Hassan	Srinagar, J&K
3.	IRC Mode	Construction of Humanities Block at GDC Bemina.	770	CCDG Adept Consultants Pvt Ltd	M/s Construction Engineers Pvt Ltd	Srinagar, J&K
		Construction of Staff rooms come Meeting Hall Block at GDC Bemina	176			
4.	IRC Mode	Construction of Additional class room Block at GDC Bijbehara	765	CCDG Adept Consultants Pvt Ltd	M/s Tarmac Road & Roof Builders	Anantnag, J&K
5.	IRC Mode	Construction of Administrative Block at GDC for Women Anantnag	191.16	CCDG Adept Consultants Pvt Ltd	M/s Tarmac Road & Roof Builders	Anantnag, J&K

***IRC Mode (Item Rate Contract)**

2.2 Sub-Project Detail

The buildings constructed under the JTFRP feature a stilt floor at the ground level and are designed as RCC framed structures. This thoughtful design emphasizes both functionality and safety, providing a robust foundation capable of withstanding flood impacts and seismic forces. Overall, the project not only addresses immediate educational infrastructure needs but also prioritizes long-term safety and resilience against natural disasters.

The Public Works Department (R&B) Kashmir, under the World Bank financed Jhelum Tawi Flood Recovery Project (JTFRP), has successfully completed the reconstruction of five higher education (college) buildings across flood-affected districts of Jammu & Kashmir. These buildings were selected based on the extent of damage caused by the 2014 floods, their structural condition, and their importance in supporting uninterrupted higher education services.

The subprojects were implemented in accordance with approved designs and modern construction standards, with a focus on improving structural safety, flood resilience, and seismic resistance. The interventions were tailored to site conditions and incorporated resilient design features, improved foundations, enhanced drainage systems, and the use of durable and flood-resistant construction materials. These upgrades aimed to restore essential academic infrastructure and create safe, functional, and student-friendly learning environments.

Detailed Project Reports (DPRs), along with construction-ready drawings, were prepared by the concerned agencies. LEA Associates South Asia Pvt. Ltd. (TAQAC) provided technical assistance and quality assurance support during the implementation stage. All construction works were awarded to experienced contractors through a transparent and competitive bidding process.

The scope of work included reconstruction of academic blocks, improvement of internal services, drainage and access facilities, and provision of safety features to ensure all-weather usability.

The table below presents key details of each completed building subproject, including the nature of works, implementing agency, financial details (sanctioned, revised, and final costs), and timelines covering the start and completion of construction.

Contract Details of the completed Higher Education Building Sub-projects under JTFRP										
S. No.	**Name of the Building Sub-project**	**Type of Block**	**Name of PIU**	**Name of Contractor**	**Plinth Area (m²)**	**Allotted cost (in Crores)**	**Revised cost (in Crores)**	**Completion cost (in Crores)**	**Date of Start (as per Allotment)**	**Date of Completion (Actual)**
1.	Construction of Science Block at Amar Singh College, Srinagar	RCC framed Structure	R&B Kashmir	M/s Zahoor and Co.	642	9.20	9.20	9.20	2-Oct-20	24-Apr-22
2.	Construction of Additional class room block at Government college for Women M.A. Road Srinagar	RCC framed Structure	R&B Kashmir	M/s Ghulam Hassan	590	13.34	14.16	14.16	19-Jan-19	30-Jun-22
3.	Construction of Humanities Block at GDC Bemina.	RCC framed Structure	R&B Kashmir	M/s Construction Engineers pvt ltd	770	8.97	9.45	Completion Certificate has not yet been submitted by the PIU (R&B).	18-July-19	30-Apr-24
	Construction of Staff rooms come Meeting Hall Block at GDC Bemina				176					
4.	Construction of Additional classroom Block at GDC,	RCC framed Structure	R&B Kashmir	M/s Tarmac Road & Roof Builders	765	9.22	10.12	10.06	11-July-19	31-Nov-21

	Bijbehara									
S. No.	**Name of the Building Sub-project**	**Type of Block**	**Name of PIU**	**Name of Contractor**	**Plinth Area (m^2)**	**Allotted cost (in Crores)**	**Revised cost (in Crores)**	**Completion cost (in Crores)**	**Date of Start (as per Allotment)**	**Date of Completion (Actual)**
5.	Construction of Administrative Block at GDC for Women Anantnag	RCC framed Structure	R&B Kashmir	M/s Tarmac Road & Roof Builders	191.16	2.29	2.38	2.31	19-Dec-19	19-Dec-21

** ***Completion Certificates submitted by the PIU (R&B) attached in Annexure I***

DETAILS OF THE STAKEHOLDERS		
1	**Project Implementation Unit (PIU).**	**R & B Kashmir**
2	**Project Management Unit (PMU)**	**JHELUM TAWI FLOOD RECOVERY PROJECT (JTFRP)**
3	**Design Consultant**	**CCDG Adept**
4	**Contractors**	**M/S Zahoor & Co, Tarmac, Construction Engineers, Ghulam Hassan**
5	**Quality Audit Consultants**	**LEA ASSOCIATES SOUTH ASIA PVT LTD. (TAQAC)**
6	**Funding Agency**	**The World Bank**

3. Higher Education Building Details:

3.1 Construction of Science Block at Amar Singh College, Srinagar

Sub-Project Overview

Type of Building	Name of PIU	Name of Contractor	Total Plinth area (m²)	Total Main Rooms (34)	Completion cost (in Cr)	Date of Completion (Actual)
RCC framed Structure (Stilt+3+ Attic)	R&B Kashmir	M/s Construction Engineers Pvt. Ltd.	642	Chemistry Lab (3) Lab Assist Room (7) Chemical Room (3) Preparation Room (3) Staff Room (3) Zoology Museum (1) Zoology Lab (2) Office (2) Botany Mesum (1) Botany Lab (2) Lab Store (4) Seminar Hall (3)	9.20	24-04-22

Salient Features of completed Science Block at Amar Singh College, Srinagar

S. No.	Component	Details
1	Name of Sub-Project	Construction of Science Block at Amar Singh College, Srinagar
2	Sector	Higher Education Infrastructure
3	Funding Agency	World Bank
4	Project Management Unit	Jhelum Tawi Flood Recovery Project (JTFRP)
5	Project Implementing Unit	Public Works Department (R&B), Kashmir
6	Purpose of Project	Restoration and strengthening of academic infrastructure damaged during the 2014 floods
7	Location	Amar Singh College Campus, Gogji Bagh, Srinagar
8	Type of Structure	RCC framed structure with non-load-bearing masonry infill walls

9	Total Plinth Area (**(m^2)**	642
10	Type of Foundation	RCC Raft with plinth beams
11	Flood Mitigation Measure	Stilt floor constructed up to the Highest Flood Level (HFL)
12	Structural Design Criteria	Designed to withstand both flood and seismic forces as per applicable codes
13	Roof System	Steel roof truss with colour-coated CGI sheet roofing
14	Floor System	RCC slab system
15	Architectural Style	Integrated heritage and modern architectural design
16	Heritage Features	Use of high-quality exposed bricks with lime-surkhi pointing
17	Flooring	Durable, wear-resistant flooring suitable for academic and laboratory use
18	Ceiling Finish	Gypsum board false ceilings in classrooms
19	Sanitary & Plumbing	Modern sanitary, plumbing, and drainage systems
20	Finishes	High-quality interior and exterior finishes as per approved standards
21	Exterior Emergency Exit	That has been constructed in the form of a staircase to provide unobstructed evacuation route during emergencies.
22	Ramp	Ramp at the ground floor, provided with tubular handrails on both sides. The ramp surface is hard and slip-resistant, with a proper gradient of 5% (1:20) to ensure safe access.
23	Safety & Resilience	Flood-resilient planning and enhanced structural durability
24	Academic Facilities	Classrooms and laboratories designed for science disciplines
25	Overall Outcome	Improved flood-resilient, safe, and aesthetically compatible academic infrastructure

A view of Science Block constructed at Amar Singh College, Srinagar under JTFRP

The Amar Singh College Science Block Sub-Project, implemented under the World Bank-funded Jhelum Tawi Flood Recovery Project (JTFRP), was undertaken to restore and strengthen higher-education infrastructure that was severely damaged during the 2014 floods. The college campus is situated in a low-lying area in close proximity to the River Jhelum and a flood spill channel, making it highly vulnerable to flooding.

During the 2014 flood event, the entire campus was inundated to a depth of approximately 10 feet above plinth level, with floodwaters persisting for more than 20 days. The High Flood Level (HFL) recorded within the campus area was 12 feet from ground level. The prolonged inundation led to complete disruption of academic activities, causing serious inconvenience to students, faculty, and staff. Classes, examinations, and laboratory work could not be conducted for over two months. The existing infrastructure particularly the Science laboratories was damaged beyond repair, with laboratories, equipment, interiors, and essential services completely destroyed.

While the available lecture halls were adequate for the existing student strength, the absence of functional laboratories severely affected practical education for science students. Additionally, there was an acute shortfall of museums and herbarium facilities, which are essential components of science teaching and research. In view of these deficiencies and the irreparable damage to the old facilities, it was decided to construct a new, resilient Science Block under Component-1 of JTFRP.

Amar Singh College is a multi-faculty postgraduate institution with a legacy of more than a century. Established in November 1913 as the *Amar Singh Technical Institute* and formally inaugurated in May 1914, it was converted into Amar Singh College in 1942. The college serves as the nodal and lead institution for colleges in Kashmir and Ladakh and was declared the Headquarters of the Cluster University under RUSA in June 2014. The campus spans approximately 35 hectares, comprising academic buildings, playgrounds, parks, and landscaped areas.

Overall, the Science Block sub-project represents a strategic flood-recovery and resilience intervention, fully aligned with the objectives of JTFRP, by restoring critical academic infrastructure, improving disaster preparedness, and supporting sustainable higher-education development in the Kashmir Valley.

The sub-project aims to:

- restore and enhance science education facilities through well-designed laboratories, classrooms, and faculty spaces;
- improve disaster resilience by incorporating flood-resistant and seismic compliant design features;
- ensure safe, inclusive, and barrier-free access for students and staff;
- integrate sustainable design elements such as natural lighting, ventilation, and energy-efficient systems; and
- create a conducive academic environment aligned with contemporary higher-education standards.

3.1.1 SCIENCE BLOCK UPGRADES & IMPROVEMENT

The sub-project, titled “Construction of Science Block at Amar Singh College, Srinagar,” has been designed in consideration of the flood vulnerability, seismicity of the region, and contemporary academic requirements. Further, as the existing academic buildings within the Amar Singh College campus were constructed over a century ago, they are now classified as heritage structures. Keeping this heritage context in view, the new science block has been designed with a heritage character, ensuring harmonious integration with the existing academic buildings.

Structurally, the building is founded on an RCC raft with plinth beams. The stilt floor extends up to the Highest Flood Level (HFL) to effectively mitigate future flood risks. The structure has been designed to withstand both flood and seismic forces. An RCC framed structural system with non-load-bearing masonry infill walls has been adopted, along with RCC slabs and a steel roof truss covered with colour coated CGI sheets.

The building features durable laboratory flooring, modern sanitary and plumbing systems, and high-quality interior and exterior finishes, all executed in accordance with approved architectural and engineering standards.

Internal view of the Botany Lab of the science Block at Amar Singh College

Angle view of the Chemistry Lab of the Science Block at Amar singh College

Architecturally, the Science Block of Amar Singh College reflects a judicious blend of heritage and modern design principles. The use of high-quality exposed bricks and lime -

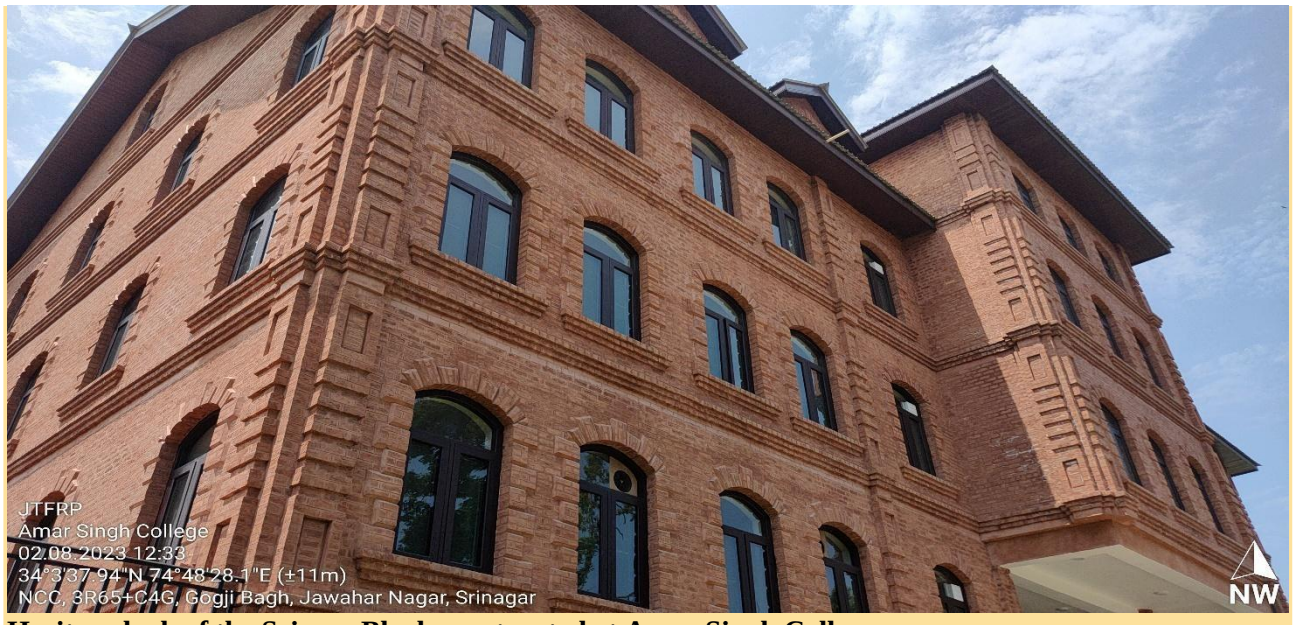
surkhi pointing imparts a distinctive heritage character, creating a visually appealing and culturally sensitive built environment while meeting contemporary functional requirements.

The old heritage block, which earlier housed lecture rooms, laboratories, and staff rooms, had become unusable due to flood damage. The newly constructed Science Block has enhanced the safety, resilience, and functional capacity of the campus, ensuring uninterrupted science education and improved learning outcomes.

The Science Block was executed under an Item Rate Contract (IRC) mode contract, following best engineering practices and in compliance with World Bank environmental and social safeguard policies. The building incorporates enhanced plinth levels, effective drainage systems, durable materials, fire safety provisions, modern electrical, plumbing, and adequate sanitation facilities.

The Science Block has been made accessible through a ramp at the Stilt floor, provided with tubular handrails on both sides. The ramp surface is hard and slip-resistant, with a proper gradient of 5% (1:20) to ensure safe access. An accessible lift with adequate capacity has been installed to serve all floors, ensuring ease of movement and inclusive access, particularly for students and staff with disabilities. Additional ramps have been provided at locations where raised curbs or steps exist.

The building has been provided with GIS (Colour coated Galvanized iron sheet) roofing in view of heavy snowfall experienced in valley and were designed against the snow load and earthquake resistant structure. These sheets are durable, rust proof, and weather proof.



Heritage look of the Science Block constructed at Amar Singh College

The building has been provided with separate Washrooms/toilets for Male and Female. Washrooms were installed with exhaust fans for proper ventilation, Geysers, branded plumbing items etc.

Science block has a toilet adapted for Specially abled users. Accessible toilets were provided at every floor of educational building to assist students with limited mobility or ageing staff. Toilets were provided with sufficient space for persons using wheelchair or any other assistive devices.

The attic floor has been provided with thermal insulation PUFF paneling, which helps regulate indoor temperatures, improves energy efficiency, and provides thermal comfort within the building.

A firefighting system has been installed for prevention during a fire spread in building, with the use of proper fire safety equipment like extinguisher, hose reels, fire monitors, nozzles and hose pipes.

Stairway lightening for illumination during day and night was provided to avoid risk of any accident and fall.

An exterior emergency exit in the form of a staircase has been constructed to provide a clear and unobstructed evacuation route to a place of safety during emergencies. The outdoor exit route is provided with guardrails on unenclosed sides to prevent fall hazards. The staircase surfaces are slip-resistant, ensuring safe evacuation under emergency conditions.

The newly constructed Science Block at Amar Singh College has significantly strengthened the campus infrastructure by providing safe, resilient, and modern academic spaces. The sub-project supports uninterrupted teaching and practical learning, contributes to institutional disaster preparedness, and aligns with the broader objectives of JTFRP by promoting sustainable and resilient public infrastructure in the Kashmir Valley.

Stilt Floor of the Science Block constructed up to the HFL at Amar Singh College

Floor-Wise Academic facilities of the Science Block constructed at Amar Singh College

S.No.	FLOOR	ACCOMODATION TYPE	NUMBER	SIZE
1	Upper Ground Floor	Chemistry Laboratory	03	9.14 x 7.5 m
		Lab Assistant Room	03	3.5 x 2.45 m
		Chemical Room	03	3.5 x 2.45 m
		Preparation Room	03	2.2 x 2.4 m
		Staff room with attached washroom	01	3.5 x 7.4 m
		Toilet Block for Male	01	4.45 x 5.25 m
		Toilet Block for Females	01	4.45 x 5.25 m
		One Specially Abled Toilet	01	1.75 x 2.0 m
		Utility Room	01	1.89 x 2.1 m
2	First Floor	Zoology Museum	01	9.14 x 18.45 m
		Office	01	3.5 x 7.2 m

		Laboratory	02	7.55 x 9.1 m
		Staff room with attached washroom	01	3.5 x 7.4 m
		Lab Assistant Room	02	3.5 x 3.6 m
		Lab Store	02	3.5 x 3.6 m
		Toilet Block for Males	01	4.45 x 5.25 m
		Toilet Block for Females	01	4.45 x 5.25 m
		One Specially Abled Toilet & Utility Room	01	1.75 x 2.0 m
		Utility Room	01	1.89 x 2.1 m
3	**Second Floor**	Botany Museum	01	9.14 x 18.45 m
		Office	01	3.5 x 7.2 m
		Laboratory	02	7.55 x 9.1 m
		Staff room with attached washroom	01	3.5 x 7.4 m
		Lab Assistant Room	02	3.5 x 3.6 m
		Lab Store	02	3.5 x 3.6 m
		Toilet Block for Males	01	4.45 x 5.25 m
		Toilet Block for Females	01	4.45 x 5.25 m
		One Specially Abled Toilet & Utility Room	01	1.75 x 2.0 m
		Utility Room	01	1.89 x 2.1 m
4.	**Attic Floor**	Seminar Hall	02	9.48 x 11.68 m
		Seminar Hall	01	7.55 x 9.10 m

The construction of the Science Block at Amar Singh College under the Jhelum Tawi Flood Recovery Project (JTFRP) has significantly enhanced the academic and practical learning environment for students. The provision of Chemistry, Zoology, and Botany laboratories, along with dedicated museums for Zoology and Botany, enables students to gain hands on experimental experience and direct exposure to scientific specimens, thereby strengthening their conceptual understanding and research skills. The Seminar Hall further supports academic growth by providing a dedicated space for lectures,

workshops, academic discussions, and research presentations. Together, these facilities create a modern, safe, and conducive learning environment that promotes experiential learning, encourages scientific temper, and improves the overall quality of science education at the college.

Approximately **480** science students per year will directly benefit from the newly constructed Science Block through access to improved laboratory facilities, museums, and academic spaces. In addition, around **6,211** students of the college will derive indirect benefits from the enhanced infrastructure, which strengthens the overall academic environment and institutional capacity.

3.2 Construction of Additional Classroom Block at Government Degree College for Women M.A Road Srinagar

Sub-project Overview

Type of Block	Name of PIU	Name of Contractor	Total Plinth area (m^2)	Total Main Rooms (24)	Completion cost (in Cr)	Date of Completion (Actual)
RCC framed Structure (Stilt+4+ Attic)	R&B Kashmir	M/s Ghulam Hassan	590	Lecture Halls (16) HOD Rooms (02) Staff Rooms (02) Common Room (01) Staff Room (3)	14.16	30-06-22

Salient Features of completed Additional classroom Block at Women's College, M.A. Road, Srinagar

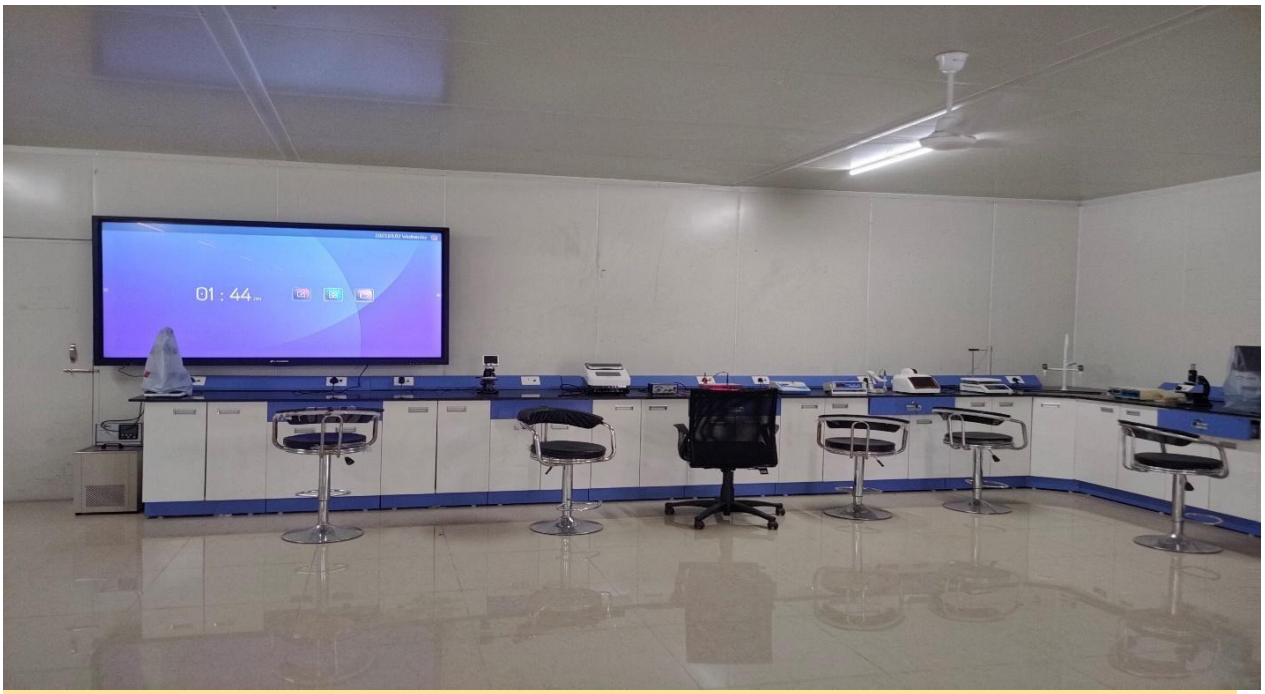
S. No.	Component	Details
1	Name of Sub-Project	Construction of Additional classroom Block at Government College for Women, M.A. Road, Srinagar
2	Sector	Higher Education Infrastructure
3	Funding Agency	World Bank
4	Project Management Unit	Jhelum Tawi Flood Recovery Project (JTFRP)
5	Project Implementing Unit	Public Works Department (R&B), Kashmir
6	Purpose of Project	Restoration and strengthening of academic infrastructure damaged during the 2014 floods
7	Location	M.A. Road Women's College Campus, Srinagar
8	Plinth Area of the Block	590 (m^2)
9	Type of Structure	RCC framed structure with non-load-bearing masonry infill walls

10	Type of Foundation	RCC Raft
11	Flood Mitigation Measure	Stilt floor constructed up to the Highest Flood Level (HFL).
12	Structural Design Criteria	Designed to withstand both flood and seismic forces as per applicable codes
13	Roof System	Steel roof truss with colour-coated CGI sheet roofing
14	Floor System	RCC slab system
15	Architectural Style	Integrated heritage and modern architectural design
16	Heritage Features	Use of high-quality exposed bricks with lime-surkhi pointing
17	Flooring	Durable, wear-resistant flooring suitable for academic use
18	Ceiling Finish	RCC
19	Sanitary & Plumbing	Modern sanitary, plumbing, and drainage systems
20	Finishes	High-quality interior and exterior finishes as per approved standards
21	Exterior Emergency Exit	That has been constructed in the form of a staircase to provide unobstructed evacuation route during emergencies.
22	Ramp	Ramp at the Stilt floor, provided with tubular handrails on both sides. The ramp surface is hard and slip-resistant, with a proper gradient of 5% (1:20) to ensure safe access.
23	Attic Floor	Having size (19.9m/10.96m) With Puff paneling, which helps regulate indoor temperatures.
25	All Floors	Provided with washroom facilities (separate for Males, Females, and specially abled users)
25	Safety & Resilience	Flood-resilient planning and enhanced structural durability
26	Academic Facilities	Classrooms designed for general lectures.
27	Overall Outcome	Improved flood-resilient, safe, and aesthetically compatible academic infrastructure

A view of Additional Classroom Block constructed at GDC for Women, M.A. Road under JTFRP

The construction of Additional classroom Block Sub-Project at GDC for women, M.A. Road, implemented under the World Bank-funded Jhelum Tawi Flood Recovery Project (JTFRP), was undertaken to restore and strengthen higher-education infrastructure that was severely damaged during the 2014 floods. The college campus is situated in a low-lying area in close proximity to the River Jhelum, making it highly vulnerable to flooding.

Government College for Women M.A. Road was affected by the floods due to its low-lying nature and proximity to two water bodies namely Fakhray Kashmir Stream and river Jhelum. During the floods of 2014 the college was inundated up to 12 feet from the plinth for more than 20 days. The result was suspension of academic activities for more than one month due to damages to infrastructure, laboratories, libraries etc. The old infrastructure of the college comprising of Geography and Music department was damaged beyond repair. The college was facing problems due to shortage of lecture halls, staff rooms, washrooms etc. In view of these deficiencies and the irreparable damage to the old facilities, it was decided to construct a new, resilient Classroom Block under Component-1 of JTFRP.



Part of Attic floor of the Additional classroom Block used as the Research Lab at GDC for Women, M.A Road

Overall, the Additional classroom Block sub-project represents a strategic flood-recovery and resilience intervention, fully aligned with the objectives of JTFRP, by restoring critical academic infrastructure, improving disaster preparedness, and supporting sustainable higher-education development in the Kashmir Valley.

The sub-project aims to:

- restore and enhance education facilities through well-designed classrooms, and faculty spaces;
- improve disaster resilience by incorporating flood-resistant and seismic compliant design features;
- ensure safe, inclusive, and barrier-free access for students and staff;
- integrate sustainable design elements such as natural lighting, ventilation, and energy-efficient systems; and
- create a conducive academic environment aligned with contemporary higher-education standards.

3.2.1 ADDITIONAL CLASSROOM BLOCK UPGRADES & IMPROVEMENT

The sub-project, titled “Construction of Additional classroom Block at GDC for women, M.A. Road Srinagar,” has been designed in consideration of the flood vulnerability, seismicity of the region, and contemporary academic requirements. Further, as the existing academic buildings within the women’s College campus were constructed over a century ago, they are now classified as heritage structures. Keeping this heritage context

in view, the new Additional classroom Block has been designed with a heritage character, ensuring harmonious integration with the existing academic buildings.

Structurally, the building is founded on an RCC raft with plinth beams. The stilt floor extends up to the Highest Flood Level (HFL) to effectively mitigate future flood risks. The structure has been designed to withstand both flood and seismic forces. An RCC framed structural system with non-load-bearing masonry infill walls has been adopted, along with RCC slabs and a steel roof truss covered with colour coated CGI sheets.

Stilt Floor of the Additional classroom Block was constructed up to the HFL at the GDC for Women, M.A. Road

The building features durable classroom flooring, modern sanitary and plumbing systems, and high-quality interior and exterior finishes, all executed in accordance with approved architectural and engineering standards.

Architecturally, this Additional classroom Block of Women's College reflects a judicious blend of heritage and modern design principles. The use of high-quality exposed bricks and lime -surkhi pointing imparts a distinctive heritage character, creating a visually appealing and culturally sensitive built environment while meeting contemporary functional requirements.

The old heritage block, which earlier housed lecture rooms, laboratories, and staff rooms, had become unusable due to flood damage. The newly constructed classroom Block has enhanced the safety, resilience, and functional capacity of the campus, ensuring uninterrupted education and improved learning outcomes.

The Additional classroom Block was executed under an Item Rate Contract (IRC) mode contract, following best engineering practices and in compliance with World Bank

environmental and social safeguard policies. The building incorporates enhanced plinth levels, effective drainage systems, durable materials, fire safety provisions, modern electrical, plumbing, and adequate sanitation facilities.

Heritage look of the Classroom Block constructed at GDC for women, M.A. Road

The Additional Classroom Block has been made accessible through a ramp at the Stilt floor, provided with tubular handrails on both sides. The ramp surface is hard and slip-resistant, with a proper gradient of 5% (1:20) to ensure safe access. An accessible lift with adequate capacity has been installed to serve all floors, ensuring ease of movement and inclusive access, particularly for students and staff with disabilities. Additional ramps have been provided at locations where raised curbs or steps exist.

The Block has been provided with GIS (Colour coated Galvanized iron sheet) roofing in view of heavy snowfall experienced in valley and were designed against the snow load and earthquake resistant structure. These sheets are durable, rust proof, and weather proof.

The building has been provided with separate Washrooms/toilets for Male and Female. Washrooms were installed with exhaust fans for proper ventilation, Geysers, branded plumbing items etc.

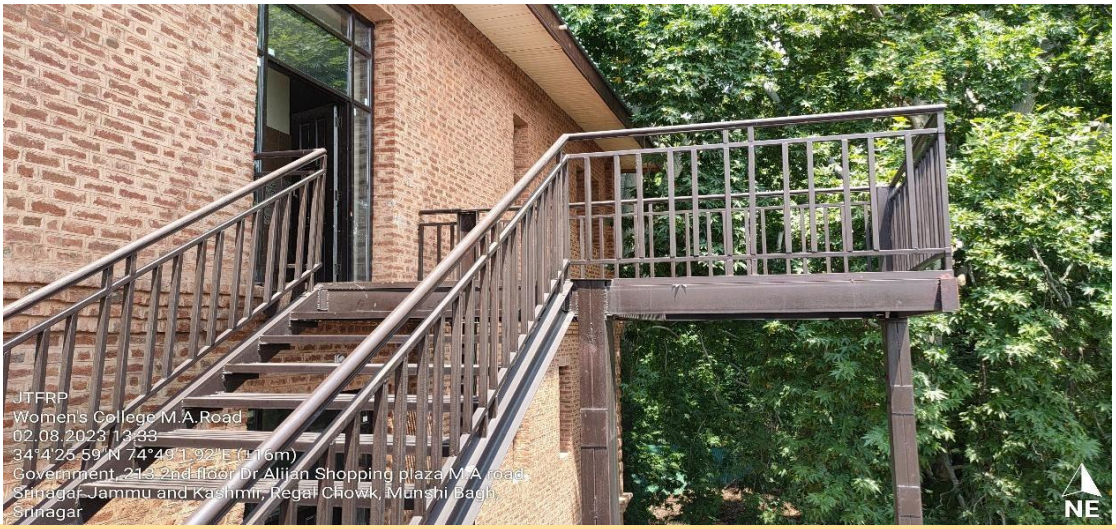
This block has a toilet adapted for specially abled users. Accessible toilets were provided at every floor of educational building to assist students with limited mobility or ageing staff. Toilets were provided with sufficient space for persons using wheelchair or any other assistive devices.

Part of Attic floor of the Additional classroom Block used as the Computer Lab at GDC for Women, M.A Road.

The attic floor has been provided with thermal insulation PUFF paneling, which helps regulate indoor temperatures, improves energy efficiency, and provides thermal comfort within the building.

A firefighting system has been installed for prevention during a fire spread in building, with the use of proper fire safety equipment like extinguisher, hose reels, fire monitors, nozzles and hose pipes.

Stairway lightening for illumination during day and night was provided to avoid risk of any accident and fall.



Exterior emergency exit of the Classroom Block constructed at GDC for women, M.A road

An exterior emergency exit in the form of a staircase has been constructed to provide a clear and unobstructed evacuation route to a place of safety during emergencies. The

outdoor exit route is provided with guardrails on unenclosed sides to prevent fall hazards. The staircase surfaces are slip-resistant, ensuring safe evacuation under emergency conditions.

The newly constructed Block at Women's College has significantly strengthened the campus infrastructure by providing safe, resilient, and modern academic spaces. The sub-project supports uninterrupted teaching and practical learning, contributes to institutional disaster preparedness, and aligns with the broader objectives of JTFRP by promoting sustainable and resilient public infrastructure in the Kashmir Valley.

View of the corridor featuring energy-efficient lighting in the Additional Classroom Block at Government Degree College (GDC) for Women, M.A. Road.

Floor-Wise Academic facilities of the Additional Classroom Block constructed at Women's College, M.A. Road, Srinagar

S.No.	FLOOR	ACCOMODATION TYPE	NUMBER	SIZE
1	Upper Ground Floor	4 no. of Lecture Halls with seat tiers of RCC	04	9.0 x 8.0 m
		Toilet Block for Male	01	3.5 x 5.75 m
		Toilet Block for Female	01	3.5 x 5.75 m
		One Specially Abled Toilet	01	2.14 x 1.8 m
		Utility Room	01	2.14 x 1.8 m
2	First Floor	Lecturer Halls with seat tiers of RCC	04	9.0 x 8.0 m
		HOD room with attached washroom & a Pantry	01	3.03 x 7.5 m
		Staff Room along with WC	01	3.03 x 7.5 m

		Toilet Block for Male	01	3.5 x 5.75 m
		Toilet Block for Female	01	3.5 x 5.75 m
		One Specially Abled Toilet & Utility Room	01	2.14 x 1.8 m
		Utility Room	01	2.14 x 1.8 m
3	**Second Floor**	Lecturer Halls with seat tiers of RCC	04	9.0 x 8.0 m
		Common Room	01	6.3 x 8.0 m
		Toilet Block for Males	01	3.5 x 5.75 m
		Toilet Block for Females	01	3.5 x 5.75 m
		One Specially Abled Toilet	01	2.14 x 1.8 m
		Utility Room	01	2.14 x 1.8 m
4	**Third Floor**	Lecturer Halls with seat tiers of RCC	04	9.0 x 8.0 m
		HOD room with attached washroom & a Pantry	01	3.03 x 7.5 m
		Staff Room along with WC	01	3.03 x 7.5 m
		Toilet Block for Male	01	3.5 x 5.75 m
		Toilet Block for Female	01	3.5 x 5.75 m
		One Specially Abled Toilet & Utility Room	01	2.14 x 1.8 m
		Utility Room	01	2.14 x 1.8 m
5	**Attic Floor**	Research Room and Computer Lab	01	19.9 x 10.96 m

The construction of the Additional Classroom Block at Government Degree College (GDC) for Women, M.A. Road, under the Jhelum Tawi Flood Recovery Project (JTFRP) has substantially enhanced the academic infrastructure of the college. The Block comprises Lecture Halls, HOD Rooms, Staff Rooms, additional Staff Rooms, and Common Room, designed to address space constraints and accommodate the increasing student enrollment.

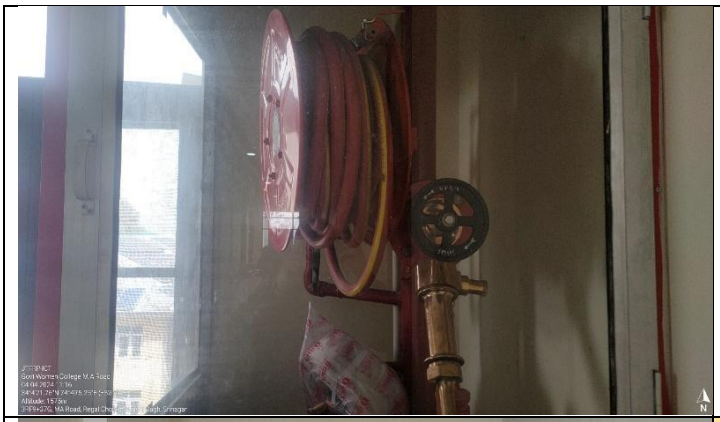
These facilities provide adequate and well-organized spaces for regular classes, academic coordination, and faculty interaction, thereby strengthening the overall teaching

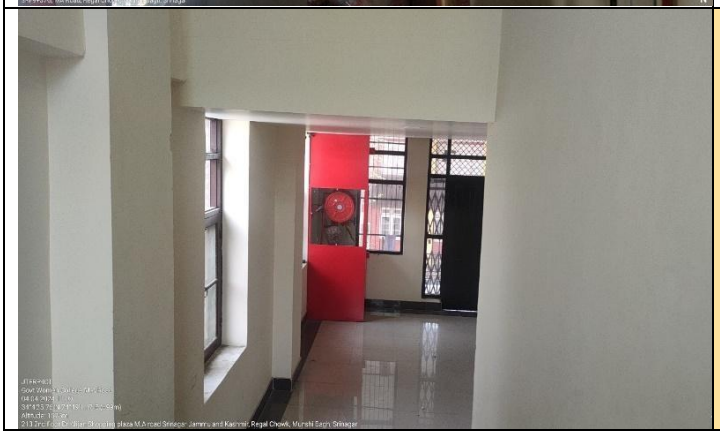
- learning process. The provision of dedicated HOD and Staff Rooms supports departmental functioning and academic planning, while the Common Room offers a space for student engagement and interaction.

Collectively, the Additional Classroom Block has helped reduce overcrowding, improve classroom management, and create a more comfortable and conducive learning environment. The new infrastructure ensures safe and resilient academic spaces, promotes uninterrupted education, and contributes to the overall institutional development of the college.

Approximately **2,750** students will benefit from this sub-project through improved access to well-equipped lecture halls and enhanced academic facilities that support effective teaching and learning.

In addition, around 150 faculty members will benefit from the provision of dedicated HOD and staff rooms, which facilitate better academic coordination, planning, and a more conducive working environment within the institution.





A comprehensive Fire Fighting System has been installed in Additional Classroom Block at GDC for Women, M.A. Road under JTFRP ensuring enhanced safety.

Design Intervention for Protection of Scheduled Chinar Trees before the construction of Additional Classroom Block at GDC for Women, M.A. Road

During the design phase of the proposed sub-project, due consideration was given to the presence of legally protected (Scheduled) Chinar trees within the campus.

Under the **J&K Preservation of Specified Trees Act, 1969**, Chinar (Platanus orientalis) is classified as a Scheduled Tree. Such trees cannot be removed, damaged, or adversely impacted without formal approval from competent authorities.

During the environmental screening conducted under the Environmental and Social Management Framework (ESMF) of JTFRP, the following was identified:

- Five (05) Scheduled Chinar trees were located near the alignment of the proposed building sub-project.
- Direct construction activity would impact their root zones and potentially threatened their survival.
- Prior to finalizing the building footprint, the Environmental Team intervened to ensure that the layout was revised to protect all five (05) Scheduled Chinar trees.
- Recognizing the legal, ecological, and heritage significance of these trees, the design team adopted a proactive avoidance approach instead of opting for removal or compensatory mitigation.

05 Scheduled Chinar trees that were falling near the alignment of the Building at GDC, M.A. Road

Design Planning Adjustments

To ensure complete protection of the Scheduled Chinar trees, the following design interventions were undertaken:

1. The building orientation was designed in such a way that the impact on these 4 Scheduled Chinar trees was totally avoided. Adequate setback distances were maintained from the trunk and canopy spread. The classroom block was positioned to avoid interference with the tree's root protection zones (RPZ).

2. Conceptual Tree Protection Zones were established around each Chinar tree (TPZ). No excavation, foundation work, trenching, or material storage was permitted within these zones. The layout ensured zero direct structural intrusion into the critical root areas.

- The preserved Chinar trees were retained within open and landscaped areas and a open space was maintained between the building and tree alignment. This approach enhanced microclimatic comfort, shade, and campus aesthetics while celebrating natural heritage.

Proper protection was given to the Root zones of the Scheduled Chinar Trees

Open space was maintained between the building and tree alignment

The design intervention for the Additional Classroom Block at GDC for Women, M.A. Road, reflects a responsible and environmentally sensitive planning approach. Instead of removing five Scheduled Chinar trees that fall close to the alignment, the building footprint was strategically designed to completely avoid impact on these protected heritage trees.

This intervention demonstrates JTFRP's commitment to:

- Disaster-resilient infrastructure development
- Legal compliance and environmental protection
- Preservation of Kashmir's natural and cultural heritage
- Sustainable campus planning

The project successfully balanced infrastructure expansion with ecological conservation, ensuring that educational development progressed without compromising protected natural assets.

3.3 Construction of Humanities Block at GDC Bemina.
Construction of Staff rooms cum Meeting Hall Block at GDC Bemina

Sub-Project Overview

Type of Block	Name of PIU	Name of Contractor	Total Plinth area (m²)	Total Main Rooms (22)	Completion cost (in Cr)	Date of Completion (Actual)
RCC framed Structure (Stilt+2+Attic) Both Blocks	R&B Kashmir	M/s Construction Engineers Pvt. Ltd.	Humanities Block (770) Staff Rooms Block (176)	Lecture Halls (8) Staff Rooms (04) HOD Rooms (02) Common Hall (01) Language labs (02) Departmental Library (01) Meeting Hall (01) Other Rooms (03)	9.45	30-04-24

Salient Features of completed Humanities Block and Staff Rooms/Meeting Hall at GDC Bemina, Srinagar

S. No.	Component	Details
1	Name of Sub-Project	Construction of Humanities Block at GDC Bemina. Construction of Staff rooms cum Meeting Hall Block at GDC Bemina
2	Sector	Higher Education Infrastructure
3	Funding Agency	World Bank
4	Project Management Unit	Jhelum Tawi Flood Recovery Project (JTFRP)
5	Project Implementing Unit	Public Works Department (R&B), Kashmir
6	Purpose of Project	Restoration and strengthening of academic infrastructure damaged during the 2014 floods
7	Location	Bemina Degree College Campus, Srinagar
8.	Plinth Area of the Blocks	Humanities Block 770 (m²)

		Staff Rooms Cum Meeting Hall 176 (m^2)
9	Type of Structure	RCC framed structure with non-load-bearing masonry infill walls
10	Type of Foundation	RCC Raft
11	Flood Mitigation Measure	Stilt floor constructed up to the Highest Flood Level (HFL).
12	Structural Design Criteria	Designed to withstand both flood and seismic forces as per applicable codes
13	Roof System	Steel roof truss with colour-coated CGI sheet roofing
14	Floor System	RCC slab system
17	Flooring	Durable, wear-resistant flooring suitable for academic use
18	Ceiling Finish	RCC
19	Sanitary & Plumbing	Modern sanitary, plumbing, and drainage systems
20	Finishes	High-quality interior and exterior finishes as per approved standards
21	Exterior Emergency Exit	That has been constructed in the form of a staircase to provide unobstructed evacuation route during emergencies. No exterior emergency exit was installed in the Staff Rooms cum Meeting Hall Block, as it was not required as per the design criteria.
22	Ramp	Ramp of Humanities Block at the Stilt floor, provided with tubular handrails on both sides. The ramp surface is hard and slip-resistant, with a proper gradient of 5% (1:20) to ensure safe access.
21	Safety & Resilience	Flood-resilient planning and enhanced structural durability
22	Academic Facilities	Classrooms designed for teaching disciplines. Staff Rooms cum Meeting Hall Block was designed for multipurpose use accommodating faculty offices, administrative functions, and group meetings.
23	Overall Outcome	Improved flood-resilient, safe, and aesthetically compatible academic infrastructure

A view of Humanities Block constructed at GDC, Bemina under JTFRP

The construction of Humanities Block and Staff rooms cum meeting hall Block Sub-Project, implemented under the World Bank funded Jhelum Tawi Flood Recovery Project (JTFRP), restored and strengthened higher-education infrastructure severely damaged in the 2014 floods.

The Abdul Ahad Azad Memorial Government Degree College, Bemina, was severely damaged during the 2014 floods, and its construction of Humanities and Staff rooms Block was taken up under the Jhelum Tawi Flood Recovery Project (JTFRP). The college is located in a low-lying area near a flood spill channel and the River Jhelum, which made it highly vulnerable to flooding. During the floods, the entire campus was inundated up to about 8 feet above plinth level and remained submerged for more than 20 days. As a result, staff and students faced severe inconvenience, and academic activities could not be conducted for over a month.

The existing infrastructure particularly the Humanities block was damaged beyond repair, with equipment, interiors, and essential services completely destroyed. The available lecture halls were inadequate for the existing student strength, due to the damage caused by the 2014 floods. Additionally, there was a shortfall of staff rooms and meeting hall, which are essential components of teaching and research. In view of these deficiencies and the irreparable damage to the old facilities, it was decided to construct a new, resilient Additional Classroom Block under Component-1 of JTFRP.

There were a total of 28 classrooms, out of which 17 were used for humanities courses with time gap arrangements. After the floods, students could be accommodated in only 20 permanent classrooms. These arrangements were highly inadequate, resulting in overcrowding and poor learning conditions. The available classroom infrastructure was insufficient to meet the needs of the existing student strength.

Overall, the Additional Classroom and Staff rooms/Meeting Hall Block sub-project represents a strategic flood-recovery and resilience intervention, fully aligned with the objectives of JTFRP, by restoring critical academic infrastructure, improving disaster preparedness, and supporting sustainable higher-education development in the Kashmir Valley.

The sub-project aims to:

- restore and enhance education facilities through well-designed classrooms and faculty spaces;
- improve disaster resilience by incorporating flood-resistant and seismic compliant design features;
- ensure safe, inclusive, and barrier-free access for students and staff;
- integrate sustainable design elements such as natural lighting, ventilation, and energy-efficient systems; and
- create a conducive academic environment aligned with contemporary higher-education standards.

3.3.1 HUMANITIES AND STAFF ROOMS/MEETING HALL BLOCK UPGRADES & IMPROVEMENT

The sub-project, titled "Construction of Humanities and Staff Rooms cum Meeting Hall Block at GDC, Bemina," was designed considering the area's flood vulnerability, regional seismicity, and modern academic needs. It includes two separate blocks: the Humanities Block and the Staff Rooms cum Meeting Hall Block.

Structurally, both Blocks are founded on an RCC raft with plinth beams. The stilt floor extends up to the Highest Flood Level (HFL) to effectively mitigate future flood risks. The structures have been designed to withstand both flood and seismic forces. An RCC framed structural system with non-load-bearing masonry infill walls has been adopted, along with RCC slabs and a steel roof truss covered with colour coated CGI sheets.

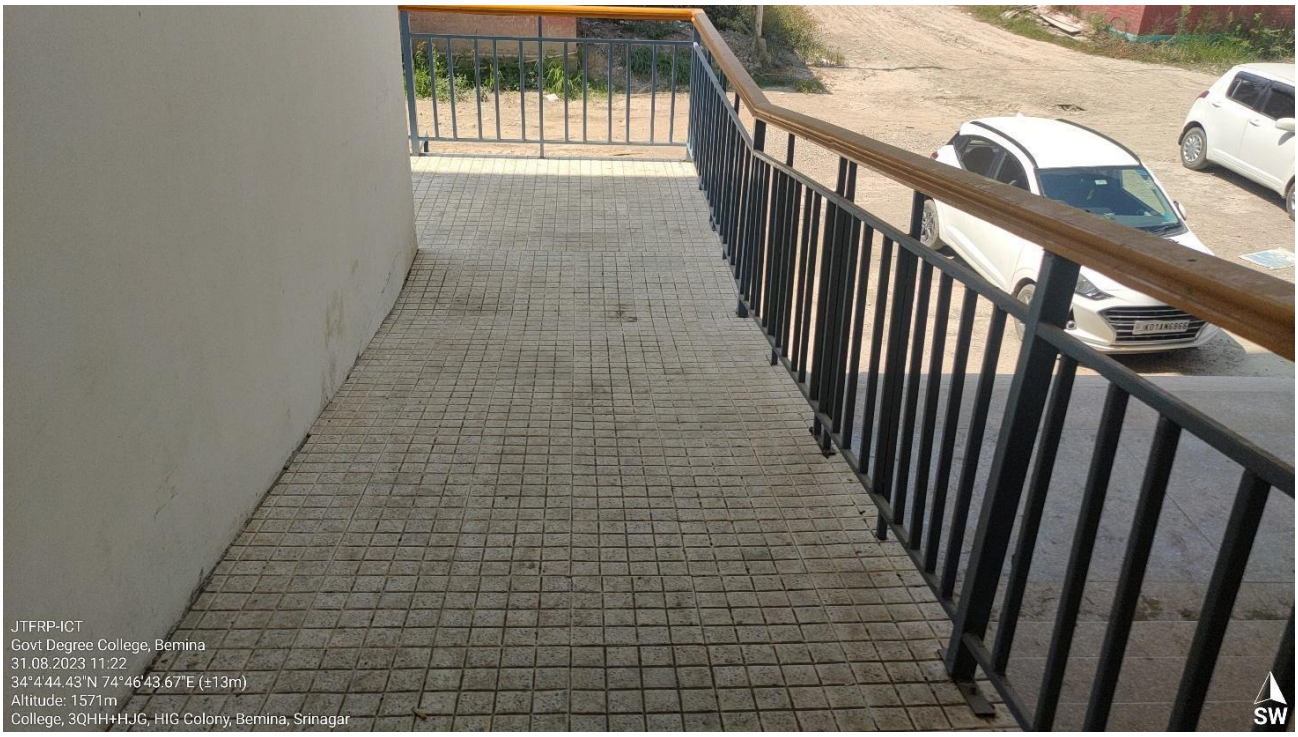
Stilt Floor of the Humanities Block constructed up to the HFL at GDC, Bemina

The Blocks features durable classroom flooring, modern sanitary and plumbing systems, and high-quality interior and exterior finishes, all executed in accordance with approved architectural and engineering standards.

The newly constructed Humanities and Staff Rooms/Meeting Hall Blocks have enhanced the safety, resilience, and functional capacity of the campus, ensuring uninterrupted education and improved learning outcomes.

The Blocks were executed under an Item Rate Contract (IRC) mode contract, following best engineering practices and in compliance with World Bank environmental and social safeguard policies. The Blocks incorporates enhanced plinth levels, effective drainage systems, durable materials, modern electrical, plumbing, and adequate sanitation facilities.

The Humanities Block has been made accessible through a ramp at the stilt floor, provided with tubular handrails on both sides. The ramp surface is hard and slip-resistant, with a proper gradient of 5% (1:20) to ensure safe access. An accessible lift with adequate capacity has been installed to serve all floors, ensuring ease of movement and inclusive access, particularly for students and staff with disabilities. Additional ramps have been provided at locations where raised curbs or steps exist.



A view of the ramp of the Humanities Block constructed at GDC Bemina to ensure safe access for specially abled persons.

The Blocks have been provided with GIS (Colour coated Galvanized iron sheet) roofing in view of heavy snowfall experienced in valley and were designed against the snow load and earthquake resistant structure. These sheets are durable, rust proof, and weather proof.

The Blocks have been provided with separate Washrooms/toilets for Male and Female. Washrooms were installed with exhaust fans for proper ventilation, Geysers, branded plumbing items etc. These Blocks have also a toilet adapted for specially abled people. Accessible toilets were provided at every floor of educational building to assist students with limited mobility or ageing staff. Toilets were provided with sufficient space for persons using wheelchair or any other assistive devices.

The Humanities Block attic floor features PUFF panel thermal insulation to regulate indoor temperatures, enhance energy efficiency, and ensure thermal comfort. This floor is designated for Language labs and the Departmental library.

Stairway lightening for illumination during day and night was provided to avoid risk of any accident and fall.

The Humanities Block features an Exterior Emergency exit staircase providing a clear, unobstructed evacuation route to safety.

Exterior Emergency exit constructed for the Humanities Block at GDC, Bemina

The newly constructed Blocks at GDC Bemina, Srinagar has significantly strengthened the campus infrastructure by providing safe, resilient, and modern academic spaces. The sub-project supports uninterrupted teaching and learning, contributes to institutional disaster preparedness, and aligns with the broader objectives of JTFRP by promoting sustainable and resilient public infrastructure in the Kashmir Valley.

Floor-wise Academic facilities of the Humanities Block constructed at GDC Bemina, Srinagar

S.No.	FLOOR	ACCOMODATION TYPE	NUMBER	SIZE
1	Upper Ground Floor	Lecture Halls with seat tiers of RCC	04	9.45 x 9.22 m
		Staff room with two attached washroom & a Pantry	01	3.87 x 5.7 m
		Toilet Block for Males	01	3.87 x 7.1 m
		Toilet Block for Females	01	3.87 x 7.1 m
		One Specially Abled Toilet & Utility Room	01	2.14 x 1.8 m
		Generator Room	01	3.17 x 4.06 m

		Fuel Room	01	1.82 x 2.35 m
		Electrical panel room	01	1.8 x 2.5 m
		Store	01	1.82 x 4.9 m
2	**First Floor**	Lecture Halls with seat tiers of RCC	04	9.45 x 9.22 m
		Staff room with two attached washroom & a Pantry	01	3.87 x 5.7 m
		HOD room attached washroom & a Pantry	01	3.87 x 5.7 m
		Common Hall	01	6.9 x 9.5 m
		Toilet Block for Males	01	3.87 x 7.1 m
		Toilet Block for Females	01	3.87 x 7.1 m
		One Specially Abled Toilet & Utility Room	01	2.14 x 1.8 m
4.	**Attic Floor**	Language Labs	02	9.4 x 5.6 m
		Departmental Library	01	26.3 x 5.7 m

Floor-wise Facilities of the Staff Rooms Cum Meeting Hall Block constructed at GDC Bemina, Srinagar

S.No.	FLOOR	ACCOMODATION TYPE	NUMBER	SIZE
1	**Upper Ground Floor**	Staff Room	02	6.23 x 4.16 m
		HOD room attached washroom	01	3.02 x 4.16 m
		Store Room	01	3.02 x 1.93 m
		Toilet Block for Males	01	2.98 x 2.54 m
		Toilet Block for Females	01	2.98 x 4.16 m
		One Specially Abled Toilet	01	1.9 x 1.7 m
2	**First Floor**	Meeting Halls	01	6.23 x 10.53 m
		Room	01	6.23 x 4.16 m

		Room	01	3.02 x 4.16 m
		Room	01	2.98 x 4.16 m
		Store	01	3.02 x 1.93 m
		Pantry	01	1.9 x 1.75 m
4.	**Attic Floor**	Space	01	16 x 31 m

A view of Staff room cum Meeting Hall constructed at GDC, Bemina under JTFRP

The construction of the Humanities Block at GDC, Bemina under the Jhelum Tawi Flood Recovery Project (JTFRP) has substantially strengthened the academic environment for students and faculty alike. The Block comprises Lecture Halls, Staff Rooms, HOD Rooms, Language Laboratories, a Departmental Library, a Meeting Hall, and additional support rooms, all designed to meet contemporary academic requirements. These facilities provide adequate space for teaching, faculty interaction, departmental coordination, and student engagement. The Language Laboratories will enhance communication and linguistic competencies, while the Departmental Library will promote academic research and self-directed learning. The Common Hall and Meeting Hall will facilitate seminars, discussions, and collaborative activities. Collectively, the Humanities Block will create a safe, and conducive learning environment that supports quality education, academic excellence, and institutional development.

Approximately **850** Arts students will directly benefit from the newly constructed Humanities Block through access to improved lecture halls, language laboratories,

departmental library, and dedicated academic and faculty spaces. In addition, around **5,500** students of the college will derive indirect benefits from the strengthened infrastructure, which enhances the teaching - learning environment, promotes academic collaboration, and improves the institutional capacity of the college.

Around **130** teaching and non-teaching staff members will also benefit from the provision of dedicated staff rooms and improved toilet facilities, which enhance their working environment and overall institutional functionality.

3.4 Construction of Additional classroom Block at Government Degree College, Bijbehara

Sub-project Overview

Type of Block	Name of PIU	Name of Contractor	Total Plinth area (m^2)	Total Main Rooms (22)	Completion cost (in Cr)	Date of Completion (Actual)
RCC framed Structure (Stilt+3+Attic)	R&B Kashmir	M/s Tarmac Road and Roof Builders	765	Lecture Hall (12) Staff Rooms (03) HOD Rooms (2) Meeting Hall (01) Common Hall (01) Language classes (02) Departmental Library (01)	10.06	31-11-21

Salient Features of completed Additional classroom Block at GDC, Bijbehara, Anantnag

S. No.	Component	Details
1	Name of Sub-Project	Construction of Additional classroom Block at GDC Bijbehara, Anantnag
2	Sector	Higher Education Infrastructure
3	Funding Agency	World Bank
4	Project Management Unit	Jhelum Tawi Flood Recovery Project (JTFRP)
5	Project Implementing Unit	Public Works Department (R&B), Kashmir
6	Purpose of Project	Restoration and strengthening of academic infrastructure damaged during the 2014 floods
7	Location	Bijbehara Degree College Campus, Anantnag

8.	Plinth Area of the Block	765 (m^2)
9	Type of Structure	RCC framed structure with non-load-bearing masonry infill walls
10	Type of Foundation	RCC Raft
11	Flood Mitigation Measure	Stilt floor constructed up to the Highest Flood Level (HFL).
12	Structural Design Criteria	Designed to withstand both flood and seismic forces as per applicable codes
13	Roof System	Steel roof truss with colour-coated CGI sheet roofing
14	Floor System	RCC slab system
17	Flooring	Durable, wear-resistant flooring suitable for academic use
18	Ceiling Finish	RCC
19	Sanitary & Plumbing	Modern sanitary, plumbing, and drainage systems
20	Finishes	High-quality interior and exterior finishes as per approved standards
21	Exterior Emergency Exit	That has been constructed in the form of a staircase to provide unobstructed evacuation route during emergencies.
22	Ramp	Ramp at the Stilt floor, provided with tubular handrails on both sides. The ramp surface is hard and slip-resistant, with a proper gradient of 5% (1:20) to ensure safe access.
21	Safety & Resilience	Flood-resilient planning and enhanced structural durability
22	Academic Facilities	Classrooms designed for teaching disciplines
23	Overall Outcome	Improved flood-resilient, safe, and aesthetically compatible academic infrastructure

A view of Additional Classroom Block constructed at GDC, Bijbehara under JTFRP

The GDC Bijbehara Additional Classroom Block Sub-Project, implemented under the World Bank-funded Jhelum Tawi Flood Recovery Project (JTFRP), was undertaken to restore and strengthen Higher Education infrastructure that was severely damaged during the 2014 floods. The campus of this college is located in a low-lying area close to the River Jhelum, making it highly vulnerable to flooding.

During the 2014 flood event, the entire campus was inundated to a depth of about 7 feet above plinth level, with floodwaters remaining for more than 10 days. The High Flood Level (HFL) recorded within the campus was approximately 9 feet above ground level. This prolonged inundation caused a complete disruption of academic activities, resulting in significant inconvenience to students, faculty, and staff. Classes, examinations, and laboratory work could not be conducted for over two months.

Following the floods, students were accommodated in only seven (07) permanent classrooms and seven (07) makeshift classrooms constructed using prefabricated materials. These arrangements were highly inadequate, leading to overcrowding and poor learning conditions. The available classroom infrastructure was insufficient to meet the needs of the existing student strength.

At that time, the campus had only one academic block, which housed seven (07) lecture halls along with the principal's office, an auditorium, departments of Chemistry and Computer Applications, laboratories for Botany, Zoology, and Chemistry, examination halls, and washroom facilities. Considering the extensive flood damage and the acute

shortage of classroom space, it was decided to construct a new Additional Classroom Block at GDC Bijbehara under Component-1 of JTFRP.

The sub-project aims to:

- restore and enhance education facilities through well-designed classrooms and faculty spaces;
- improve disaster resilience by incorporating flood-resistant and seismic compliant design features;
- ensure safe, inclusive, and barrier-free access for students and staff;
- integrate sustainable design elements such as natural lighting, ventilation, and energy-efficient systems; and
- create a conducive academic environment aligned with contemporary higher-education standards.

4.4.1 ADDITIONAL CLASSROOM BLOCK UPGRADES & IMPROVEMENT

The sub-project, titled “Construction of Additional Classroom Block at GDC, Bijbehar,” has been designed in consideration of the flood vulnerability, seismicity of the region, and contemporary academic requirements.

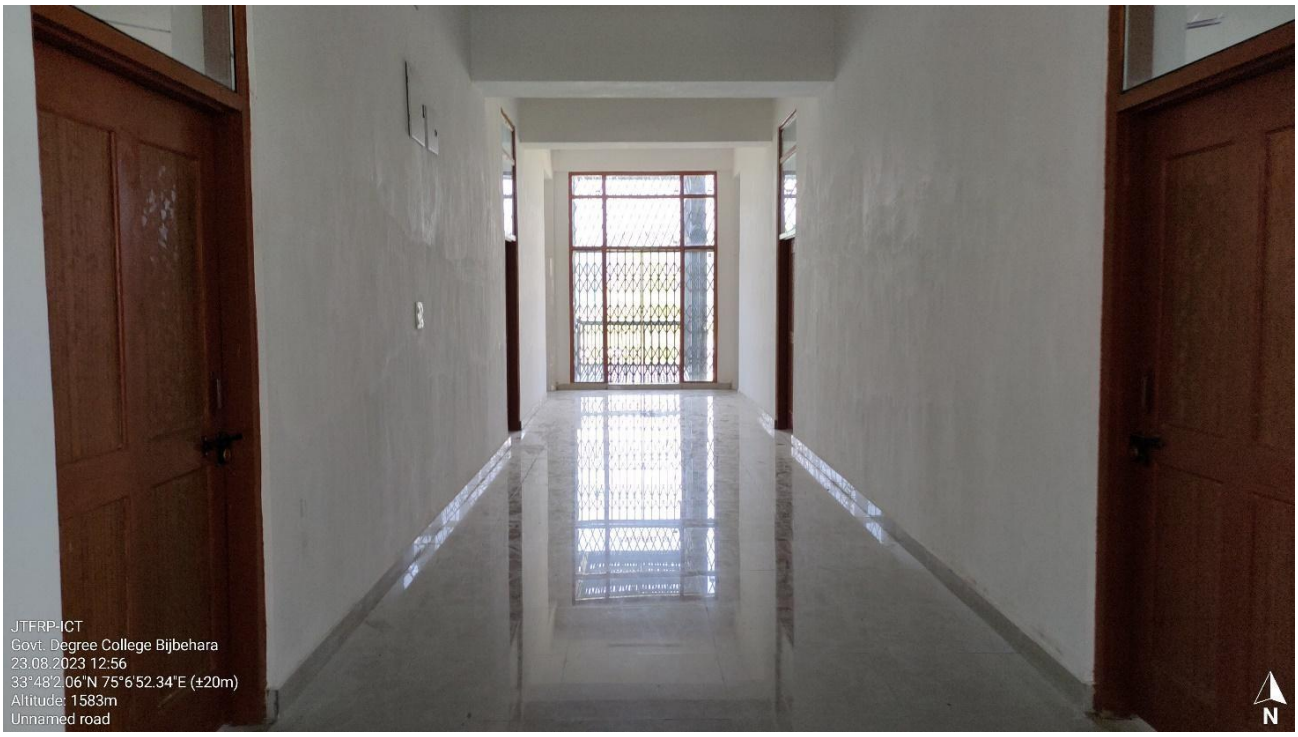
Structurally, the building is founded on an RCC raft with plinth beams. The stilt floor extends up to the Highest Flood Level (HFL) to effectively mitigate future flood risks. The structure has been designed to withstand both flood and seismic forces. An RCC framed structural system with non-load-bearing masonry infill walls has been adopted, along with RCC slabs and a steel roof truss covered with colour coated CGI sheets.

Stilt Floor of the Additional classroom Block constructed up to the HFL at GDC, Bijbehara

The Block features durable classroom flooring, modern sanitary and plumbing systems, and high-quality interior and exterior finishes, all executed in accordance with approved architectural and engineering standards.

The newly constructed Additional Classroom Block has enhanced the safety, resilience, and functional capacity of the campus, ensuring uninterrupted education and improved learning outcomes.

The Additional Classroom Block was executed under an Item Rate Contract (IRC) mode contract, following best engineering practices and in compliance with World Bank environmental and social safeguard policies. The building incorporates enhanced plinth levels, effective drainage systems, durable materials, modern electrical, plumbing, and adequate sanitation facilities.



A view of the corridor of the Classroom Block constructed at GDC Bijbehara, highlighting the ample natural light illumination.

Inside view of the classroom Block constructed at GDC, Bijbehara

The Additional Classroom Block has been made accessible through a ramp at the Stilt floor, provided with tubular handrails on both sides. The ramp surface is hard and slip-resistant, with a proper gradient of 5% (1:20) to ensure safe access. An accessible lift with adequate capacity has been installed to serve all floors, ensuring ease of movement and inclusive access, particularly for students and staff with disabilities. Additional ramps have been provided at locations where raised curbs or steps exist.

The building has been provided with GIS (Colour coated Galvanized iron sheet) roofing in view of heavy snowfall experienced in valley and were designed against the snow load and earthquake resistant structure. These sheets are durable, rust proof, and weather proof.

The building has been provided with separate Washrooms/toilets for Male and Female. Washrooms were installed with exhaust fans for proper ventilation, Geysers, branded plumbing items etc.

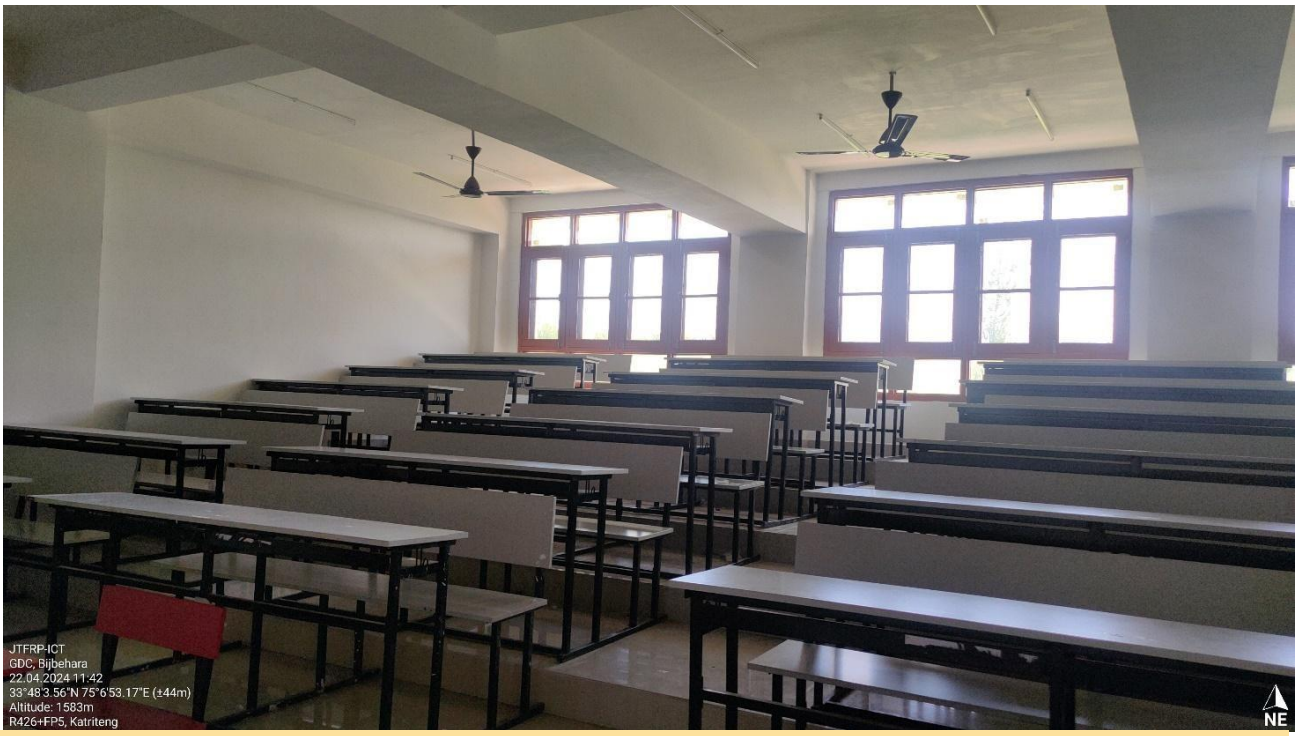
Additional Classroom Block has a toilet adapted for disabled users. Accessible toilets were provided at every floor of educational building to assist students with limited mobility or ageing staff. Toilets were provided with sufficient space for persons using wheelchair or any other assistive devices.

The attic floor has been provided with thermal insulation PUFF paneling, which helps regulate indoor temperatures, improves energy efficiency, and provides thermal comfort within the building.

Stairway lightening for illumination during day and night was provided to avoid risk of any accident and fall.

An exterior emergency exit in the form of a staircase has been constructed to provide a clear and unobstructed evacuation route to a place of safety during emergencies. The outdoor exit route is provided with guardrails on unenclosed sides to prevent fall hazards. The staircase surfaces are slip-resistant, ensuring safe evacuation under emergency conditions.

The newly constructed Additional Classroom Block at GDC Bijehara has significantly strengthened the campus infrastructure by providing safe, resilient, and modern academic spaces. The sub-project supports uninterrupted teaching and learning, contributes to institutional disaster preparedness, and aligns with the broader objectives of JTFRP by promoting sustainable and resilient public infrastructure in the Kashmir Valley.



Internal view of the classroom of Additional Block constructed at GDC, Bijbehara

Floor-Wise Academic facilities of Additional Classroom Block constructed at GDC, Beijbehara

S.No.	FLOOR	ACCOMODATION TYPE	NUMBER	SIZE
1	Upper Ground Floor	Lecture Halls with seat tiers of RCC	04	9.45 x 9.22 m
		Staff room with two attached washroom & a Pantry	01	3.87 x 5.7 m
		Generator Room	01	3.87 x 4.06 m
		Fuel Room	01	2 x 2.5 m
		Electrical Panel Room	01	2.8 x 2.7 m
		Store	01	1.8 x 4.9 m
		Toilet Block for Male	01	3.87 x 7.1 m
		Toilet Block for Female	01	3.8 x 7.1 m
		One Specially Abled Toilet & Utility Room	01	2.14 x 1.8 m
2	First Floor	Lecture Halls with seat tiers of RCC	04	9.45 x 9.22 m
		HOD room with two attached washroom & a Pantry	01	3.87 x 5.7 m
		Staff Room along with WC for Male & Female	01	3.87 x 4.06 m
		Meeting Hall	01	6.96 x 9.54 m
		Toilet Block for Male	01	3.87 x 7.1 m
		Toilet Block for Female	01	3.8 x 7.1 m
		One Specially Abled Toilet & Utility Room	01	2.14 x 1.8 m
3	Second Floor	Lecture Halls with seat tiers of RCC	04	9.45 x 9.22 m
		HOD room with two attached washroom & a Pantry	01	3.87 x 5.7 m
		Staff Room along with WC for Male & Female	01	3.87 x 4.06 m
		Common Hall	01	6.96 x 9.54 m
		Toilet Block for Males	01	3.87 x 7.1 m

		Toilet Block for Females	01	3.8 x 7.1 m
		One Specially Abled Toilet & Utility Room	01	2.14 x 1.8 m
4.	**Attic Floor**	Language Class	02	9.44 x 5.52 m
		Departmental Library	01	26.31 x 5.52 m

A view of the Additional Classroom Block constructed at GDC, Bijbehara, under JTFRP

The construction of the Additional Classroom Block at Government Degree College (GDC), Bijbehara, under the Jhelum Tawi Flood Recovery Project (JTFRP) has significantly strengthened the academic infrastructure of the college. The Block comprises well designed lecture halls and associated academic spaces aimed at addressing the shortage of teaching facilities and accommodating the growing student strength. These facilities provide adequate and structured space for regular classes, academic interaction, and effective teaching - learning processes.

The Additional Classroom Block has helped reduce overcrowding, improved classroom management, and created a more comfortable and student friendly environment. Collectively, the new infrastructure ensures a safe, resilient, and conducive academic setting that supports uninterrupted education, enhances learning outcomes, and contributes to the overall institutional development of the college.

Approximately **3500** students per year will directly benefit from the newly constructed Additional Classroom Block at Government Degree College (GDC), Bijbehara, through access to improved and adequately sized classrooms that provide a more organized and conducive teaching-learning environment.

Furthermore, nearly 70 teaching and non-teaching staff members will also benefit from the improved facilities, which contribute to a better working environment and enhance the overall efficiency and functionality of the institution.

A view of information board of the sub-project "Construction of Additional classroom Block at GDC, Bijbehara"

3.5 Construction of Administrative Block at Government Degree College for Women, Anantnag

Sub-project Overview

Type of Block	Name of PIU	Name of Contractor	Total Plinth area (m^2)	Total Main Rooms (11)	Completion cost (in Cr)	Date of Completion (Actual)
RCC framed Structure (Stilt+2+ Attic)	R&B Kashmir	M/s Tarmac Road and Roof Builders	191.16	Establishment & Admission Room (02) Principal Room (01) Vice Principal Room (01) Meeting Hall (01) Accounts Room (02) Examination Room (01) Strong Room (01) Record Room (02)	2.31	19-12-21

Salient Features of completed Administrative Block at GDC for Women, Anantnag

S. No.	Component	Details
1	Name of Sub-Project	Construction of Administrative Block at GDC for Women, Anantnag
2	Sector	Higher Education Infrastructure
3	Funding Agency	World Bank
4	Project Management Unit	Jhelum Tawi Flood Recovery Project (JTFRP)
5	Project Implementing Unit	Public Works Department (R&B), Kashmir
6	Purpose of Project	Restoration and strengthening of academic infrastructure damaged during the 2014 floods

7	Location	Govt. Degree College for Women Campus, Anantnag
8.	Plinth Area of the Block	191.16 (m²)
9	Type of Structure	RCC framed structure with non-load-bearing masonry infill walls
10	Type of Foundation	RCC Raft
11	Flood Mitigation Measure	Stilt floor constructed up to the Highest Flood Level (HFL).
12	Structural Design Criteria	Designed to withstand both flood and seismic forces as per applicable codes
13	Roof System	Steel roof truss with colour-coated CGI sheet roofing
14	Floor System	RCC slab system
17	Flooring	Durable, wear-resistant flooring suitable for academic use
18	Ceiling Finish	RCC
19	Sanitary & Plumbing	Modern sanitary, plumbing, and drainage systems
20	Finishes	High-quality interior and exterior finishes as per approved standards
22	Ramp	Ramp at the Stilt floor provided to ensure safe access.
21	Safety & Resilience	Flood-resilient planning and enhanced structural durability
22	Academic Facilities	Offices and functional spaces designed to support academic administration and institutional operations.
23	Overall Outcome	Improved flood-resilient, safe, and aesthetically compatible academic infrastructure

Administrative Block constructed at GDC for Women, Anantnag under JTFRP

The Government Degree College for Women, Anantnag, is located in a low-lying area close to the River Jhelum, making it highly vulnerable to flooding. During the 2014 floods, the entire college campus was submerged up to about 6 feet above plinth level and remained inundated for more than three days. As a result, academic activities were severely disrupted, and the college could not function normally for over one month.

The existing infrastructure suffered extensive damage and was rendered beyond repair. The college did not have a dedicated administrative Block; therefore, the administrative offices and records were housed in a temporary arrangement at ground level. Due to flooding, important records and documents were completely damaged and lost. The absence of a proper administrative facility and the damaged infrastructure created serious operational difficulties for the institution.

In view of the extensive damage caused by the 2014 floods and the lack of a dedicated administrative block, there was an urgent need to restore and strengthen the institutional infrastructure of the college. The existing arrangements were inadequate to meet administrative requirements and to support the delivery of quality higher education.

The construction of a new Administrative Block under the World Bank-funded Jhelum Tawi Flood Recovery Project (JTFRP) was therefore considered essential. The project aimed to provide safe, functional, and flood-resilient administrative facilities, ensure proper record management, and improve overall institutional efficiency. This intervention was

critical for restoring normal academic operations and supporting the long-term educational needs of the college.

The sub-project aims to:

- restore and enhance education facilities through well-designed Administrative Block;
- improve disaster resilience by incorporating flood-resistant and seismic compliant design features;
- ensure safe, inclusive, and barrier-free access for students and staff;
- integrate sustainable design elements such as natural lighting, ventilation, and energy-efficient systems; and
- Strengthen institutional administration through modern, well-planned facilities consistent with contemporary higher education requirements.

4.5.1 ADMINISTRATIVE BLOCK UPGRADES & IMPROVEMENT

The sub-project, titled "Construction of Administrative Block at GDC for Women, Anantnag," has been designed in consideration of the flood vulnerability, seismicity of the region, and contemporary academic requirements.

Structurally, the Administrative Block is founded on an RCC raft with plinth beams. The stilt floor extends up to the Highest Flood Level (HFL) to effectively mitigate future flood risks. The structure has been designed to withstand both flood and seismic forces. An RCC framed structural system with non-load-bearing masonry infill walls has been adopted, along with RCC slabs and a steel roof truss covered with colour coated CGI sheets.

The Block features durable flooring, modern sanitary and plumbing systems, and high-quality interior and exterior finishes, all executed in accordance with approved architectural and engineering standards.

The newly constructed Administrative Block has improved administrative efficiency, record safety, and institutional coordination, enabling uninterrupted academic and administrative operations.

The Administrative Block was executed under an Item Rate Contract (IRC) mode contract, following best engineering practices and in compliance with World Bank environmental and social safeguard policies. The Block incorporates enhanced plinth levels, effective drainage systems, durable materials, fire safety provisions, modern electrical, plumbing, and adequate sanitation facilities.

Stilt Floor of the Administrative Block constructed up to the HFL at GDC for women, Anantnag

An accessible lift with adequate capacity has been installed to serve all floors, ensuring ease of movement and inclusive access.

Lift installed in the Administrative Block at GDC for Women, Anantnag

The Block has been provided with GIS (Colour coated Galvanized iron sheet) roofing in view of heavy snowfall experienced in valley and were designed against the snow load and earthquake resistant structure. These sheets are durable, rust proof, and weather proof.

The building has been provided with separate Washrooms/toilets for Male and Female. Washrooms were installed with exhaust fans for proper ventilation, Geysers, branded plumbing items etc.

Administrative Block has a toilet adapted for specially abled users.

The attic floor has been provided with thermal insulation PUFF paneling, which helps regulate indoor temperatures, improves energy efficiency, and provides thermal comfort within the building.

Stairway lightening for illumination during day and night was provided to avoid risk of any accident and fall.

The newly constructed Administrative Block at GDC for Women, Anantnag, has significantly strengthened the campus infrastructure by providing safe, resilient, and modern administrative spaces. The sub-project supports uninterrupted academic operations, enhances institutional disaster preparedness, and aligns with the broader objectives of the JTFRP by promoting sustainable and resilient public infrastructure in the Kashmir Valley.

Floor-Wise Academic facilities of Administrative Block constructed at GDC for Women, Anantnag

S.No.	FLOOR	ACCOMODATION TYPE	NUMBER	SIZE
1	**Upper Ground Floor**	Establishment & Admission Room	02	6.735 x 4.2 m
		Vice principal Room with attached washroom	01	3.27 x 4.2 m
		Pantry	01	3.23 x 1.75 m
		Waiting area	01	3.26 x 4.31 m
		Toilet Block for male	01	3.23 x 4.2 m
		Toilet Block for female	01	3.23 x 2.54 m
		Store room	01	3.2 x 1.97 m
2	**First Floor**	Meeting Hall	01	6.7 x 4.2 m
		Principal Room with attached washroom	01	6.73 x 4.2 m
		Accounts Rooms	02	3.235 x 4.20 m
		Examination Room	01	3.230 x 4.20 m

		Strong Room	01	3.27 x 2.04 m
		Pantry	01	1.5 x 1.75 m
3	**Attic Floor**	Record Rooms	02	7.00 x 4.00 m

The construction of the Administrative Block at Government Degree College (GDC) for Women, Anantnag, under the Jhelum Tawi Flood Recovery Project (JTFRP) has significantly strengthened the administrative infrastructure of the college. The Block comprises Establishment and Admission Rooms, Principal Room, Vice Principal Room, Meeting Hall, Accounts Rooms, Examination Room, Strong Room, and Record Rooms, all designed to streamline institutional operations and improve service delivery.

These dedicated spaces facilitate efficient admission procedures, examination management, financial administration, and record maintenance, while also providing appropriate offices for academic leadership and decision-making. The Meeting Hall supports official deliberations, coordination meetings, and administrative planning. Collectively, the Administrative Block enhances organizational efficiency, transparency, and institutional governance, ensuring smoother functioning of the college and contributing to a well-structured, accountable, and student-focused administrative system.

Approximately **15-20** staff members from administrative section will directly benefit from the newly constructed Administrative Block at Government Degree College (GDC) for Women, Anantnag, through improved access to streamlined admission services, examination management, and efficient academic administration facilitated by the dedicated Establishment & Admission Rooms, Examination Room, and related offices.

In addition, around **6,000** students of the college will derive indirect benefits per year from the strengthened administrative infrastructure, which enhances institutional efficiency, ensures timely service delivery, and supports smoother academic and governance processes.

Furthermore, nearly 121 teaching and 30 non-teaching staff members will also benefit from the provision of well-defined office spaces. These facilities contribute to a more organized working environment and significantly improve the overall efficiency, transparency, and functionality of the institution.

4. Environmental and Safety Compliance for the Building Sub-Projects under JTFRP

During the construction of the Building sub-projects, all reasonable measures were undertaken to protect the environment, workers, and the surrounding community. The Environmental, Health, and Safety (EHS) measures prescribed in the respective Environmental Management Plans (EMPs) for the building sub-projects were implemented to ensure full compliance with applicable environmental regulations and safety standards.

The measures implemented during the construction phase of the Building sub-projects are as follows:

1. Environment and Safety officers (ESO) were appointed by the respective contractors for implementation of activities stated in the EMP, including occupation health and safety aspects.

2. Project information Board (Flex type) showing the name of work, project cost etc. were installed.

3. Workers were provided with necessary accommodations and ancillary facilities in functional and hygienic manner, as required.

4. Wherever feasible, unskilled and semi-skilled labourers from nearby communities were prioritized for employment to promote local livelihood opportunities and community participation.

5. To ensure public comfort and safety, site-specific traffic management plans were prepared by the contractor in coordination with the Employer and the Traffic Police. The transportation of construction materials, machinery, and waste to and from these sites was scheduled during non-peak hours to minimize traffic disruptions and public inconvenience.

6. Although the construction of Buildings did not require any Scheduled tree cutting, necessary precautions were taken to prevent damage to existing trees and vegetation in adjacent and off-site areas during project activities.

7. Workers were not allowed to defecate in the open. Proper toilets fitted with septic tank and with required hand-washing facility was provided by the Contractor at the construction sites.

8. Solid waste generated at the construction site was collected in covered wasted bins. Polyethylene/plastic wastes were stored in empty cement bags and sent to authorized facilities for recycling.

9. Potable water facilities were provided at accessible locations within the construction site to ensure safe drinking water for all workers.

10. All necessary precautions were taken to protect and prevent any damage to existing structures around the construction zones, including residential and commercial properties as well as access and haul roads.

11. All necessary measures were taken to avoid water logging during the execution of the work.

12. Temporary barricades were installed to clearly demarcate the construction zones, including material storage areas. The construction site and associated labour facilities were fully enclosed to prevent unauthorized entry and accidental trespassing by workers, staff, or the general public. Appropriate warning signage was displayed along access roads adjoining the sites to alert about the movement of construction vehicles and machinery.

13. All necessary measures to ensure the safety and health of workers were implemented throughout the execution phase. These included the provision and mandatory use of appropriate personal protective equipment (PPE); adoption of safety precautions during the demolition of existing structures and cleaning; availability of first-aid facilities with adequate sterilized dressings and appliances at work zones; safe storage of hazardous, toxic, and polluting materials; and strict adherence to electrical, fire, and mechanical safety protocols.

14. All vehicles, equipment, and machinery utilized for construction activities were regularly serviced and maintained in good working condition. The contractor ensured compliance by submitting valid Pollution Under Control (PUC) certificates for all vehicles, equipment, and machinery deployed on the project.

15. Roads used by vehicles of the contractor and suppliers were maintained in a clean condition, free from dust, mud, and other extraneous materials deposited by construction activities.

17. Cement bags were stored and handled within covered areas to minimize fugitive dust emissions.

18. Only diesel generator (DG) sets equipped with acoustic enclosures were permitted for use at the construction sites to control noise pollution.

20. Abandoned deep pits or boreholes at the Building construction sites were properly sealed to eliminate safety hazards.

21. Debris generated from the demolition of structures and other construction activities was segregated for reuse within the project or in other works. Residual debris and spoils were disposed of at locations pre-approved by the Engineer/Employer, in compliance with the Construction and Demolition Waste Management Rules, 2016, and in a manner that prevented environmental contamination.

22. Paint residues remaining in containers were appropriately stored and disposed of in an environmentally sound and compliant manner.

25. Maintenance and servicing of all construction vehicles and machinery was carried out by contractor regularly to prevent Air and Noise pollution.

27. The Contractors complied with all regulations regarding safe scaffolding, ladders, working platforms, stairwells, excavations, trenches and safe means of entry and egress at all the Building sites.

The measures implemented during the Post Construction Phase of these sub-projects are as follows:

1. Upon completion of the works and prior to handing over the buildings for use, the project sites were thoroughly cleaned. All waste materials and debris were removed and disposed of at designated locations pre-approved by the Engineer/Employer. The Contractor undertook comprehensive cleanup and site restoration activities before demobilization, ensuring a safe, orderly, and environmentally compliant project closure.

2. All temporary structures erected during construction were dismantled and cleared from the Building sites.

3. All disposal pits and trenches were backfilled and properly sealed to eliminate potential safety or environmental risks.

4. The construction zones, including labour camps and other areas used or affected during project execution, were restored to a clean and orderly condition.

Approximately **20,382 people** will benefit directly & indirectly from the successful completion of these sub-projects, with enhanced safety and resilience achieved through the provision of improved Building infrastructure.

POST CONSTRUCTION COMPLIANCE OF BUILDING SUB-PROJECTS

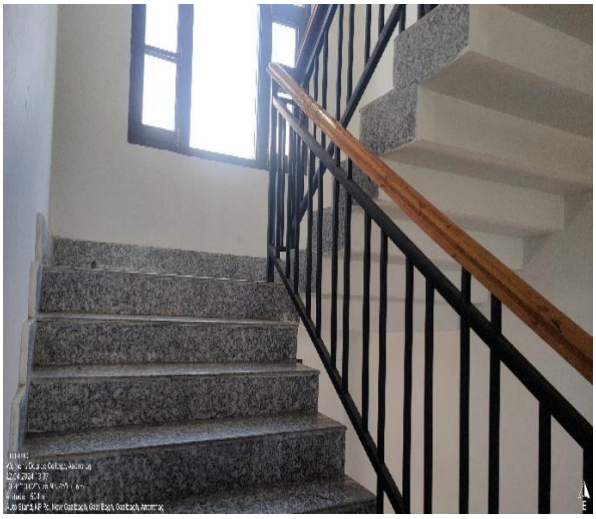
Clean-up Operations, Restoration and Rehabilitation

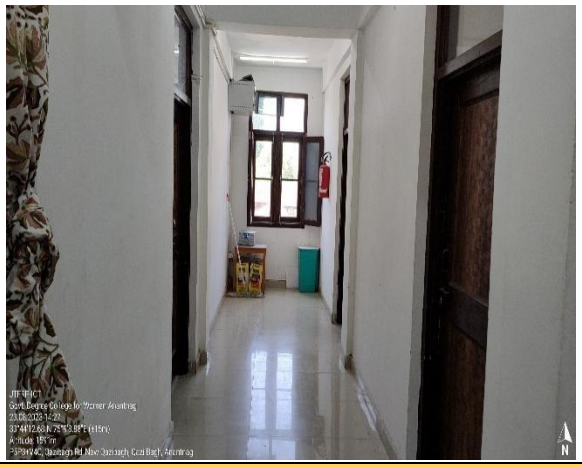
S No	Description	Yes/ No
1.	Whether Debris has been cleared from outside the buildings and levelling of ground carried out at site.	Yes
2.	Whether all construction wastes from the campsite/ plant site have been removed and disposed of at the disposal site.	Yes
3.	Whether Stockyard restoration has been successfully executed.	Yes
4.	Whether all the Cement bags were removed from the site and disposed of at disposal site.	Yes
5.	Whether all disposal pits or trenches were filled in and effectively sealed off.	Yes
6.	Whether the contractor cleared all temporary structures, debris, construction wastes, garbage, night soils, etc in an environmentally sound manner.	Yes

7.	Whether the inside of the building was cleared of waste products from activities such as concreting, finishing, painting etc.	Yes

Photographs: Environmental and Safety Compliance (Post Construction Phase)

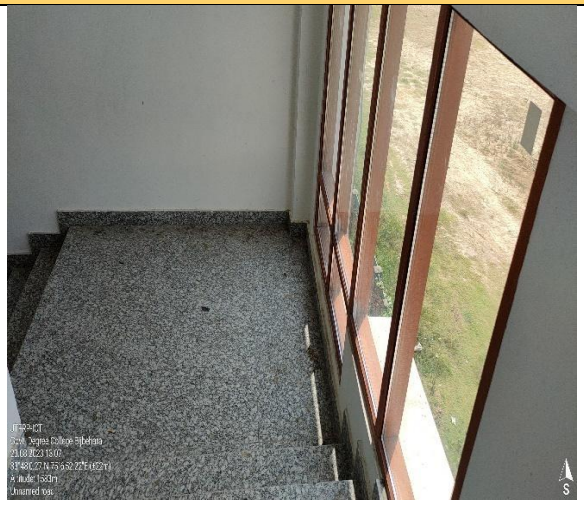
Outside view of the Administrative Block at GDC for Women, Anantnag. Ramp and Stilt area were cleared of all the construction related waste.

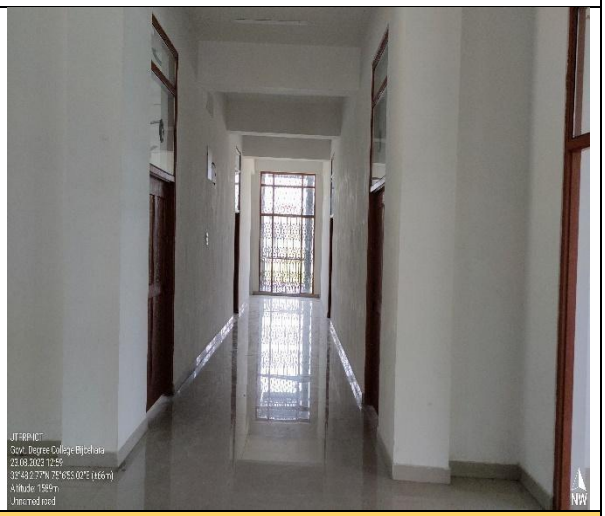




Inside views of the Administrative Block at GDC for Women, Anantnag. All rooms and washrooms were cleared of the construction waste as per EMP guidelines.

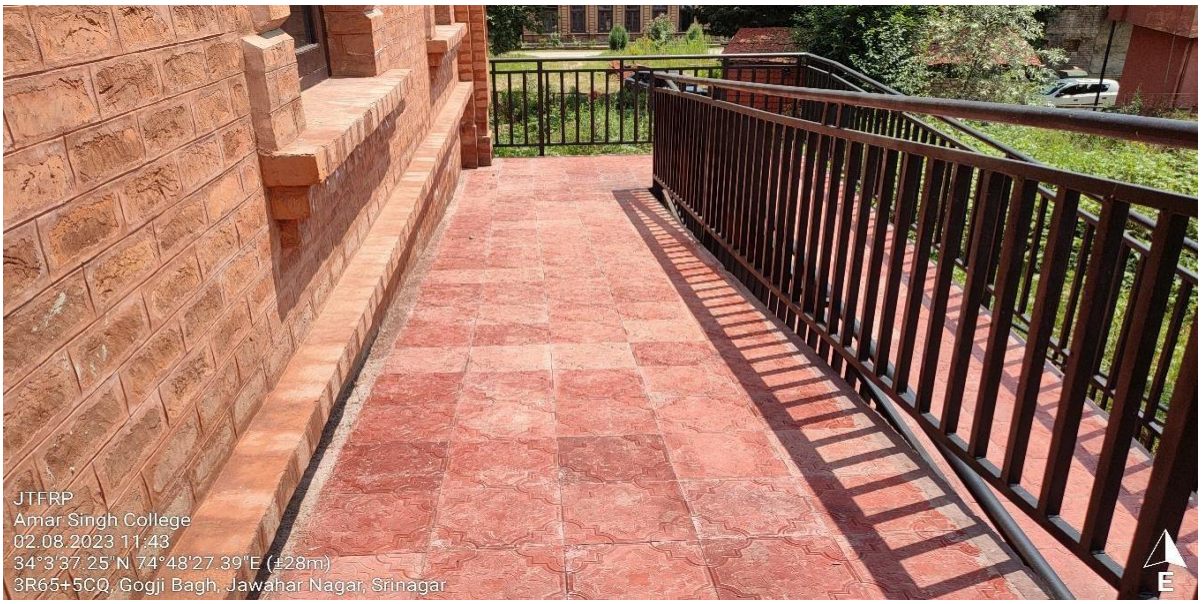
A view of Additional classroom block at GDC Bijbehara





Inside views of the Additional classroom block at GDC Bijbehara. All rooms and corridors were cleared of the construction waste as per EMP guidelines.

Outside view of the Additional classroom Block at GDC Bijbehara, Anantnag. Premises and Stilt area were cleared of all the construction related waste.



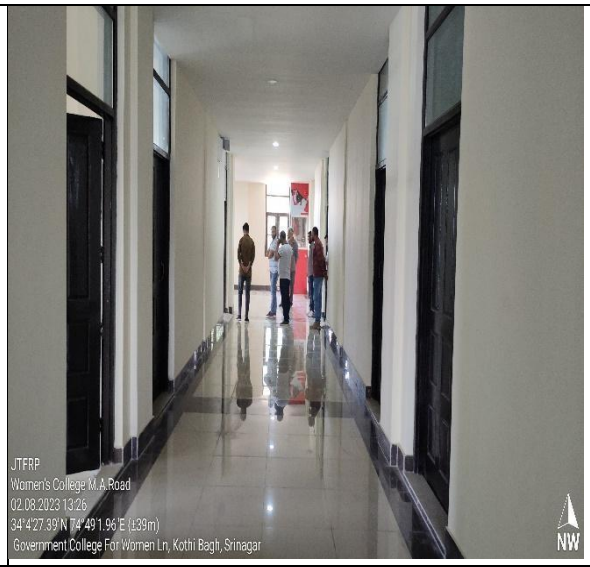
Ramps and Stilt area of the Science block were cleared of all the construction related waste at Amar singh College, Srinagar

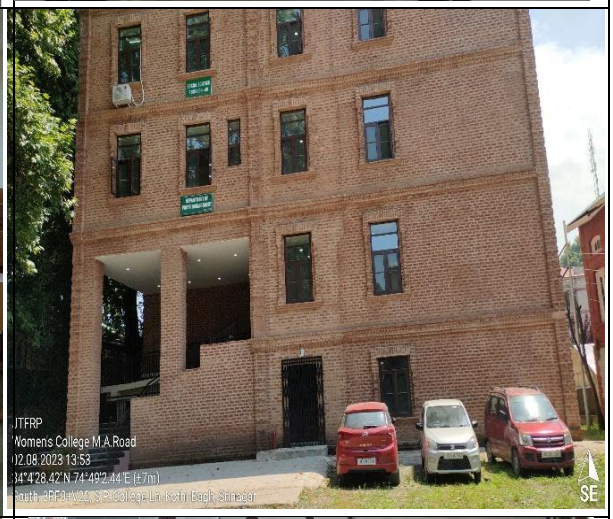
Inside views of the Science block at Amar singh college, Srinagar. All rooms, washrooms, and corridors were cleared of the construction waste as per EMP guidelines.

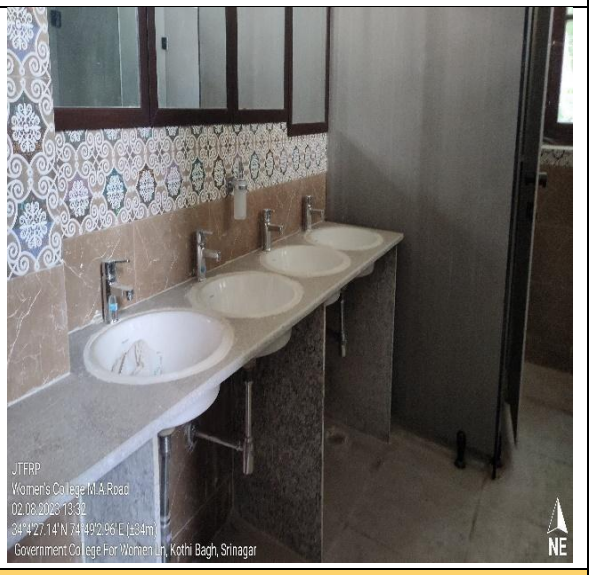
A view of the Additional classroom Block constructed at womens college M.A. Road, Srinagar

Stilt Area of Additional classroom Block cleared of all the wastes at the GDC for women, M.A. Road

Ramps and Stairs of the Additional classroom block were all cleared of the construction waste at the GDC for women, M.A. Road







All rooms, washrooms, and corridors of the Additional Block at GDC M.A Road were cleared of the construction waste as per EMP guidelines.

5. RESULTS

Deliverables

Construction of Higher Education Blocks: Successfully completed the restoration and reconstruction of 05 college buildings.

Safety and Resilience Standards: All completed Higher Education Blocks met established safety standards, including requirements for Flood and seismic resilience. Higher Education Blocks were equipped with essential facilities, including Lecture rooms, libraries, Meeting Halls, Staff rooms, and separate washrooms for Males, Females, and Specially abled.

Stakeholder Collaboration: Effectively engaged with various stakeholders, including the Public Works Department, local communities, and educational authorities, ensuring a participatory approach to Higher Education Blocks design and construction.

Enhanced Learning Environments: Developed student-friendly and inclusive educational spaces that address the diverse needs of college students, fostering engagement, accessibility, and effective learning.

Quality Assurance

The quality assurance process for the subproject involved:

Compliance Checks: Regular inspections ensured that all construction adhered to safety and design standards.

Material Quality: Stringent testing and approval of materials used in construction to guarantee durability and safety.

Stakeholder Involvement: Continuous feedback from stakeholders, including educators and community members, was incorporated to align project outcomes with educational needs.

Documentation and Reporting: Detailed documentation of construction activities, inspections, and compliance reports was maintained to ensure transparency and accountability.

6. LESSONS LEARNT

Successes Summary

The subproject achieved several key successes:

Effective Communication: Strong collaboration between the Higher Education Authority and the Public Works Department (R&B) facilitated clear communication, leading to efficient project execution.

Timely Completion: All 05 Higher Education Blocks were completed within the approved budget and extended timeline, demonstrating effective project management.

High-Quality Construction: Rigorous quality assurance processes ensured that all Higher Education Blocks met safety and design standards, resulting in durable and resilient educational facilities.

Stakeholder Engagement: Continuous feedback from educators and community members was actively sought and integrated, ensuring that the facilities addressed local educational needs.

Area of Improvement:

Campus Development: A comprehensive landscaping plan for the entire campus should have been proposed to enhance the aesthetic appeal and functionality of the college environment.

Beautification of Existing Structures: Consideration for the further beautification of older existing structures could have improved the overall learning atmosphere and community integration.

Enhanced Planning: Future projects should focus on more holistic planning that includes not only structural integrity but also the surrounding environment and potential growth needs.

7. CONCLUSION

The Higher Education Building Sub-projects implemented under the JTFRP represent a significant transformation from vulnerable, flood-damaged, and inadequate infrastructure to modern, resilient, and disaster-resistant academic facilities. The earlier structures had inherent vulnerabilities, including structural damage from the 2014 floods, insufficient capacity to accommodate growing student enrolment, inadequate safety standards, and poor functional layouts that adversely affected the quality of teaching and learning. As a result, disruptions to academic activities had become frequent, particularly during adverse weather conditions.

The newly constructed RCC-framed academic and administrative buildings directly address these challenges through comprehensive engineering and planning solutions. Designed in accordance with Flood and Seismic safety standards, the structures incorporate flood-resilient features such as elevated stilt floors where required, improved spatial planning, and durable construction to ensure long term performance with minimal maintenance.

The completion of flood and earthquake resistant higher education buildings has also enhanced students' interest in academic pursuits, reflecting improved confidence in safe, accessible, and inclusive educational environments. The integration of well-designed, student-friendly, and efficient learning spaces promotes engagement, accommodates diverse learning styles, and enhances the overall quality of the educational experience.

Beyond institutional benefits, the project contributes to broader community resilience by ensuring that educational infrastructure is capable of withstanding natural disasters. By adopting disaster-resilient construction standards and international best practices promoted by the World Bank, the initiative not only supports recovery from the devastating impacts of the 2014 floods but also strengthens the higher education sector's preparedness for future hazards.

Under this initiative, 05 college buildings in the Kashmir region were successfully completed in compliance with modern flood- and earthquake-resistant design standards. The facilities incorporate essential safety and accessibility features, including external emergency exits, ramps connecting the stilt and ground floors, lift installations, and separate toilet facilities for male, female, and specially abled persons. In addition, attic floors with PUFF panelling have been provided to ensure thermal comfort and energy efficiency.

These interventions have substantially strengthened the educational infrastructure by creating safe, inclusive, and student-centric learning environments, thereby laying a strong foundation for sustained academic growth in the region.

The World Bank-funded JTFRP Higher Education buildings introduce modern construction standards, strengthened quality assurance mechanisms, and improved campus planning practices, setting benchmarks for future educational infrastructure

development. Overall, these sub-projects are transformative initiatives that not only restore and upgrade essential higher education facilities but also lay the foundation for long-term resilience, academic excellence, and sustainable development in the Kashmir Valley.

Photograph section of Higher Education Blocks

Science Block at Amar singh college, Srinagar

Additional Classroom Block at GDC for women, M.A. Road

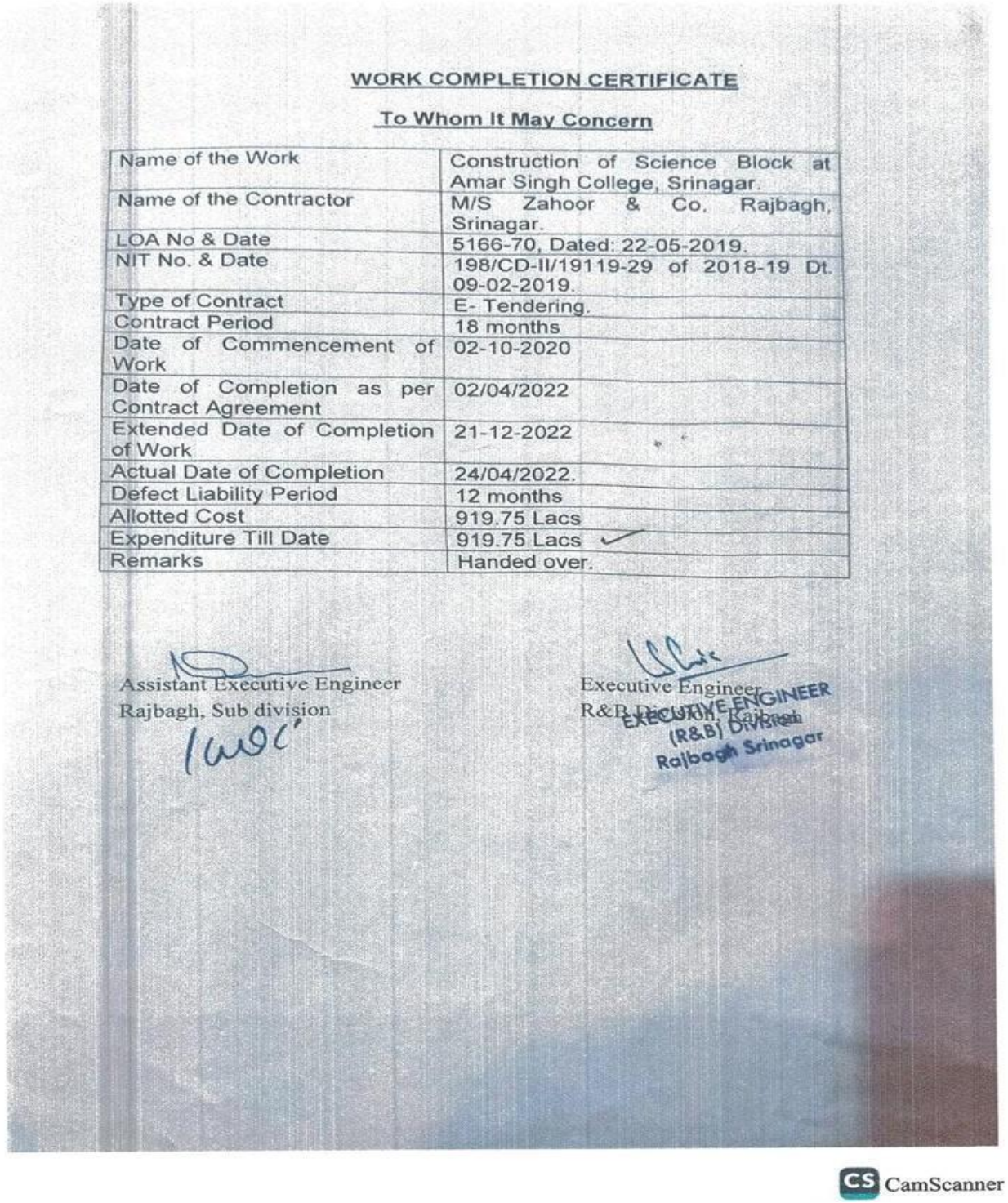
Humanities Block at GDC, Bemina

Staff Room Cum Meeting Hall at GDC, Bemina

Additional Classroom Block at GDC, Bijbehara

Administrative Block at GDC for Women, Anantnag

ANNEXURE I: Completion Certificates Submitted by PIU (R&B), Kashmir



WORK COMPLETION CERTIFICATE

To Whom It May Concern

Name of the Work	Construction of Science Block at Amar Singh College, Srinagar.
Name of the Contractor	M/S Zahoor & Co. Rajbagh, Srinagar.
LOA No & Date	5166-70, Dated: 22-05-2019.
NIT No. & Date	198/CD-II/19119-29 of 2018-19 Dt. 09-02-2019.
Type of Contract	E- Tendering.
Contract Period	18 months
Date of Commencement of Work	02-10-2020
Date of Completion as per Contract Agreement	02/04/2022
Extended Date of Completion of Work	21-12-2022
Actual Date of Completion	24/04/2022.
Defect Liability Period	12 months
Allotted Cost	919.75 Lacs
Expenditure Till Date	919.75 Lacs
Remarks	Handed over.

Assistant Executive Engineer
Rajbagh, Sub division

Executive Engineer
R&B Division, Rajbagh

EXECUTIVE ENGINEER
(R&B) Division
Rajbagh Srinagar

WORK COMPLETION CERTIFICATE

To Whom It May Concern

Name of the Work	Construction of Additional Classroom Building at GCW M.A Road Sgr under JTFRP
Name of the Contractor	M/S Ghulam Hassan (Chinar Commercial Complex The Bund Sgr)
LOA No & Date	CE/R&B/WS/23652-57 dated 28-12-2019
NIT No. & Date	198/CD-II/19119-29 of 2018-19 Dt. 09-02-2019.
Type of Contract	E- Tendering.
Contract Period	18 months
Date of Commencement of Work	19-01-2019
Date of Completion as per Contract Agreement	19-07-2020
Extended Date of Completion of Work	31-12-2022
Actual Date of Completion	30/06/2022.
Defect Liability Period	12 months
Allotted Cost	1334.31 Lacs
Expenditure Till Date	1416.05 Lacs
Remarks	Handed over

Assistant Executive Engineer
Rajbagh, Sub division

Executive Engineer
R&B Division, Rajbagh
EXECUTIVE ENGINEER
(R&B) Division
Rajbagh Srinagar

Government of Jammu & Kashmir
OFFICE OF THE EXECUTIVE ENGINEERP.W.D (R&B)
DIVISION ANANTNAG
Xenrnbkhannbal@gmail.com

WORK COMPLETION CERTIFICATE

To Whom It May Concern

Name of the Work	Construction of Administrative Block at Govt. Degree College for Women Anantnag Kashmir
Name of the Contractor	M/S Tarmac Road and Roof Builders Pampore
LOA No & Date	SE Anantnag No: 6335-38 Dt: 06-12-2019
NIT/Allotment No and Date	118/RNB/KBL/8949-59/2018-19 Dt: 02-03-20219
Type of Contract	General Tender/Item Rate Contract
Contract Period	12 months
Date of Commencement of Work	19-12-2019
Date of Completion as per Contract Agreement	19-12-2020
Actual Date of Completion	19-12-2021
Defect Liability Period	3 years
Allotted/Awarded Cost	228.53 lacs
Revised Cost (variation if any)	237.79 lacs
Completion Cost	230.92 lacs
Expenditure Till Date	230.92 lacs
Handover/Takeover Status	Done vide No.R&B/KBL/W-3/1934-36 Dt: 08-02-2023
Remarks if any	.....

Executive Engineer
PWD (R&B) Division Anantnag
Executive Engineer
(R&B) Division Anantnag

WORK COMPLETION CERTIFICATE

To Whom It May Concern

Name of the Work	Contruction of additional class room block at GOvt Degree college Bijbehara
Name of the Contractor	M/S Tarmac Road and Roof Builders Pampore
LOA No & Date	27-11-2019
LOI/NTP/Allotment No. & Date	
Type of Contract	Civil
Contract Period	18 months
Date of Commencement of Work	11-07-2019
Date of Completion as per Contract Agreement	17-01-2021
Actual Date of Completion	31-11-2021
Defect Liability Period	03 yrs
Allotted/Awarded Cost	921.97 lacs
Revised Cost (variation if any)	1011.97 lacs
Completion Cost	1006.35 lacs
Expenditure Till Date	1006.35 lacs
Handover/Takeover Status	yes
Remarks if any	Physically and Financially completed

Executive Engineer
PWD(R&B) Division Anantnag

END OF REPORT