

Initial Environmental Examination

Project Number: 49108-002
February 2019

India: Himachal Pradesh Skill Development Project Sub-projects – Model Career Center at Nahan

Prepared by the Government of Himachal Pradesh for the Asian Development Bank

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ABBREVIATIONS

ADB	-	Asian Development Bank
ASI	-	Archaeological Survey of India
CPCB	-	Central Pollution Control Board
CLC	-	City Livelihood Centre
CPR	-	Common property resources
DOLE	-	Department of Labor and Employment
DOTE	-	Department of Technical Education, Vocational and Industrial Training
DOP	-	Department of Planning
DOT	-	Department of Tourism
EA	-	Executive Agency
DOUD	-	Department of Urban Development
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
FSI	-	Forest Survey of India
GOHP	-	Government of Himachal Pradesh
GOI	-	Government of India
HPSDP	-	Himachal Pradesh Skill Development Project
IEE	-	Initial Environmental Examination
IA	-	Implementing Agency
ITI	-	Industrial Training Institute
IUCN	-	International Union for Conservation of Nature
MOEFCC	-	Ministry of Environment, Forests and Climate Change
MCC	-	Model Career Center
NP	-	National Park
OM	-	Operations Manual
PA	-	Protected area
PD	-	Project director
PIU	-	Project Implementation Unit
PMC	-	Project Management Consultant
PMU	-	Project Management Unit
PUC	-	Pollution under Control
PWD	-	Public Works Department
RLC	-	Rural Livelihood Centre
REA	-	Rapid Environmental Assessment
SEIAA	-	State Environment Impact Assessment Authority
SLEC	-	State-level Empowered Committee
SPCB	-	State Pollution Control Board
SPM	-	Suspended Particulate Matter
SPS	-	Safeguard Policy Statement 2009
UNESCO	-	United Nations Educational Scientific and Cultural Organization
WLS	-	Wildlife Sanctuary

CURRENCY EQUIVALENTS

(As of September 27, 2017)
Currency unit – Indian rupee (Rs)
Rs1.00 = \$0.013888
\$1.00 = Rs 72.00

WEIGHTS AND MEASURES

dB (A) A-weighted decibel
ha - hectare
km-kilometer
km²-square kilometer
µg-microgram
m - Meter
m²-square meter
MW (megawatt) - megawatt

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EXECUTIVE SUMMARY

1. At the request of the Government of India and the Government of Himachal Pradesh (GOHP), ADB will offer \$80 million in loan assistance to modernize and reform Himachal Pradesh's technical and vocational education and training (TVET) programs, and scale up training capacity. The Department of Planning (DOP), GOHP, will be the executing agency for the proposed Himachal Pradesh Skill Development Project (HPSDP). The Himachal Pradesh *Kaushal Vikas Nigam* (HPKVN), the Department of Technical Education, Vocational & Industrial Training (DOTE), Department of Higher Education (DOHE), and the Public Works Department (PWD) will be the implementing agencies. HPKVN will also operate as the project management unit (PMU) for HPSDP. For the civil works component, it will be assisted by PWD officials who are well aware of the state and India's building codes and environmental regulations.

2. The impact of HPSDP will be a more productive work force in Himachal Pradesh equipped with market-relevant technical and vocational skills created, in alignment with the Himachal Pradesh Skill Development Policy (*Him Kaushal*), 2016. The outcome will be improved employment and livelihood development opportunities for those trained under the project. This will be achieved through the following outputs:

- Output 1: TVET in Himachal Pradesh modernized, expanded, and aligned to national standards
- Output 2: Market-aligned skills ecosystem created
- Output 3: Access to quality training institutes improved.
- Output 4: TVET institutional structure reformed and improved.

3. Output 3 of the Project will involve construction of new training facilities and upgrading of some existing buildings to improve the access of TVET programs across Himachal Pradesh¹. The new facilities include construction of 7 city livelihood centers (CLCs), 7 rural livelihood centers (RLCs), and 1 Polytechnic for women. Eleven employment exchanges will be upgraded into model career centers (MCCs). On average, the CLCs and RLCs will have 3 to 4 floors, and occupy about 900 m². The MCCs also will have 3 to 4 floors on average, and occupy around 600 m² each. **The Department of Urban Development (DOUD), Department of Rural Development(DORD), and the Department of Labor and Employment(DOLE) will help HPKVN in running livelihood development and counseling programs at the proposed CLCs, RLCs, and MCCs respectively.**

4. GOHP has assured ADB that the proposed new infrastructure will be built, either within premises owned by the government, or on vacant and unencumbered land owned by the government. No new land will be acquired, nor will anyone be displaced in anticipation of ADB funding. Sites located within or near environmentally-sensitive areas and tribal areas of Himachal Pradesh will not be considered. No project related activity will have any adverse impact on indigenous peoples or impede their cultural and human rights. Hence, from a safeguards perspective, the Project is categorized as 'B' for environment, 'C' for involuntary resettlement, and 'C' for indigenous peoples. The proposed project categorization has been reconfirmed by an experienced ADB environment and social safeguards consultant, who has already visited all sites identified by GOHP to date.

5. As part of HPSDP, one MCC has been planned at Nahan city. This MCC is planned on an unencumbered land owned by GOHP. The Nahan city is the headquarters of Sirmaur

¹A detailed Environmental and Social Management Framework (ESMF) has been prepared in line with ADB's Safeguards Policy Statement (SPS), 2009, to guide the executing agency and implementing agencies in mainstreaming environmental and social concerns into the design and implementation phases of HPSDP.

district of Himachal Pradesh. The establishment of The MCC will help skilled HP youth in getting opportunities for gainful employment. The MCC will guide the youth and will act as an interface between industry and skilled manpower of the State. The Nahan MCC will be a four storey building including lower ground and upper ground floors with a total built up area of about 618 m². On the lower ground floor, there will be Chowkidar room, reception, Pantry and Toilet Block. On upper ground floor, there will be Information Technology Room, Centre Manager's Room, waiting lounge and Gents Toilet. The first floor will be partly be covered by Labor Office, and in the balance portion, there will be two individual counseling rooms, Ladies Toilet and one group counselling room. The second floor will be covered by one Campus Interview Hall and Labor Office.

6. The architectural expression of the MCC building is in harmony with the local style of Himachal Pradesh - suitable for cool weather, with long rainy and summer seasons. The building aims to evoke a true guiding and facilitation centre for Himachali youth in getting employment. The MCC building will be a barrier-free building. There will be ramps and specially designed toilets to make it easy for people with disabilities. The MCC building will have adequate number of modern sanitation and drinking water facilities. Concrete gutters at the end of steel sheeting roofs will direct the rain water to underground rain water harvesting tanks. The clean rainwater runoff can be re used for horticultural purposes and recharging the ground water.

7. The proposal includes for the provision of solar power panels at MCC rooftop, for which a budget of about \$20,000 has been allocated. The system is expected to generate about 6 kVA which will meet the MCC demand for lighting and running the computer laboratories. The estimated cost for MCC Nahan is INR 22.103million. Any waste generated on account of operation and maintenance of solar PV Cell will be taken up by the supplier, who will also be maintaining the PV cell, for possible recycle and reuse.

8. The enclosed **Initial Environment Examination (IEE)** report provides details about the site, the potential environmental impact of the civil works, and suggests ways of mitigating and addressing these². MCC site is in urban area, there is no protected or reserved forest area nearby. There is no natural stream or river near the sub-project site. The MCC site is on an undulating terrain. There are no protected areas (national parks, bird sanctuaries, tiger reserves, etc.), wetlands, mangroves, or estuaries in or near the sub-project location. Since there are no industrial or commercial activities close to MCC site, therefore, there are no ambient air quality and noise level issues.

9. Since the MCC building will be in small size for registration of unemployed skilled youth, providing guidance for employment, and facilitation of interviews for jobs, therefore, construction of MCC building and its operations are unlikely to cause any significant impacts. These routine and localized effects associated with construction and operation of the new building can be mitigated easily by following the measures laid down in the **Environment Management Plan (EMP)** included the IEE. The EMP will be included in civil work bidding and contract documents. **The IEE confirms that the MCC Nahan subproject of HPSPD is environment category "B"**. No further special study or detailed environmental impact assessment (EIA) needs to be undertaken to comply with ADB SPS, 2009 or Government of India EIA Notification, 2006.

²Local stakeholders were involved in developing the IEE through discussions on-site and public consultation. Their views were incorporated into the IEE, and the design of the sub-project. The IEE will be made available at public locations in the town such as Municipal office building, district administration office. It will be disclosed to a wider audience via the ADB, DOUD, and HPKVN websites.

10. HPKVN and PWD will be responsible for overall planning and implementation of the civil works. They will ensure that the ESMF is followed during project implementation. The Project Management Consulting (PMC) firm already engaged under the proposed loan has experienced Environment and Social Safeguards specialists. They will assist HPKVN and PWD in supervising the civil works, ensuring that the IEE and EMP implementation as per ESMF requirements. The PMC will also help HPKVN in preparing semi-annual safeguards monitoring reports as required by ADB. HPKVN will consolidate the semi-annual reports, and submit them to ADB. ADB will post the environmental monitoring reports on its website.

I. INTRODUCTION

A. Background

1. **Location.** The subproject is establishment of a Model Career Center (MCC) at Nahan in Sirmaur district of Himachal Pradesh. The latitude and longitude of the proposed MCC are given below:

Sl. No.	Name of Facility	Latitude	Longitude
1	MCC at Nahan	30°33'32.3"N	77°18'26.8"E

2. The nearest rail head from Nahan is Ambala, at about 63.6 km from MCC site. The Nahan city is well connected to important destinations such as Shimla, Chandigarh and Delhi. The distances of important destinations is given below:

Sl. No.	CLC or RLC Location	Altitude (m)	District	Distance from site (km)
1.	CLC Nahan	934	Sirmaur	Nahan : 1.4 km Solan : 88.4 km Chandigarh Airport : 84 km New Delhi : 266 km Shimla : 135 km Ambala : 65.4 km Deharadun : 94.4 km

3. The proposed MCC site at Nahan is an open land in possession of Government of Himachal Pradesh. The Nahan town is the district headquarters of Sirmaur district. The district lies between the parallels of 31°2 to 32°5' N and 75° to 77°45' E.

4. **Present Status of Site.** The MCC site is located in an undulating terrain. The Department of Labor and Employment (DOLE) Government of Himachal Pradesh is the owner of the land. There are no permanent or temporary structures on the site. There are some trees on the site. These need to be cut for the development of MCC. The photographs of MCC site are shown below in **Figure-1**.

Figure-1: Site Photographs





B. Compliance with India's Environmental Regulatory Framework

5. India's environmental rules and regulations, as relevant for the MCC Nahan subproject, are shown in **Table 1**. The Environmental Impact Assessment (EIA) notification, 2006 by the Ministry of Environment, Forests and Climate Change (MOEFCC, GOI) specifies the requirements for mandatory environmental clearances. All projects and activities are broadly categorized into two categories—category 'A' and category 'B', based on the spatial extent of potential impacts on the environment, human health, and natural and man-made resources³. However, MOEFCC's Office Memorandum (F. No. 19-2/2013-IA- III), dated June 09, 2015, and exempts all educational and training institutes from obtaining prior environmental clearance. Since all the training facilities to be constructed or upgraded under HPSPDP, including MCC subproject, are meant for educational and training purposes, they will not require any prior environmental clearances according to the environmental rules and regulations of India. Further, as shown in **Table 1**, most other rules pertaining to India's Ancient Monuments and Archaeological Sites and Remains Act, 1958; the Wildlife Conservation Act, 1972, amended in 2003 and 2006; and the Forest (Conservation) Act, 1980, will not apply to MCC subproject. Only some clearances will be required from the Himachal Pradesh State Pollution Control Board for the construction phase of the subproject.

³ All projects or activities included as Category 'A' in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, will require prior environmental clearance from the Central Government in the Ministry of Environment, Forests and Climate Change (MoEFCC) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification; All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, or change in product mix as specified in sub paragraph (iii) of paragraph 2, but excluding those which fulfill the General Conditions stipulated in the Schedule, will require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. In addition, General Condition (GC) of the notification specifies that any project or activity specified in Category 'B' will be treated as Category A, if located in whole or in part within 5 km from the boundary of: (i) Protected Areas notified under the Wild Life Protection) Act, 1972, (ii) Critically Polluted areas as notified by the Central Pollution Control Board from time to time, (iii) Notified Eco-sensitive areas, (iv) inter-State boundaries and international boundaries

Table-1: Environmental Regulatory Compliance

Sub-Project	Applicability of Acts/Guidelines	Compliance Criteria
Construction of MCC Building at Nahan	The EIA notification, 2006 (and its subsequent amendments till date) provides for categorization of projects into category 'A' and 'B', based on extent of impacts.	The sub-project is not covered in the ambit of the EIA notification (amended till date), either as a Category 'A' or Category 'B' project. As per the Office Memorandum dated June 09, 2015 of MOEFCC, educational and training institutions are exempted from prior environmental clearance. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the GOI, are not triggered. Not Applicable
	The Ancient Monuments and Archaeological Sites and Remains Act, 1958, and the rules, 1959 provide guidance for carrying out activities including conservation, construction and reuse in and around the protected monuments.	The MCC site is not close to any monument which is protected by the Archaeological Survey of India (ASI). Hence, no clearance is needed from ASI. Not Applicable
	Water (Prevention and control of pollution) Act, 1974 and Air (prevention and control of pollution) Act, 1981	Consent for Establishment (CFE) and Consent for Operation (CFO) from the State Pollution Control Board will be required during construction for installation of diesel generator set, hot mix plant, and concrete batching plant. For the operation phase, no CFO or CFE will be required. Applicable for Construction phase
	The Wildlife Conservation Act, 1972, amended in 2003 and 2006, provides for protection and management of Protected Areas.	No wildlife protected areas nearby. Not Applicable
	Forest (Conservation) Act, 1980	This act provides guidelines for conservation of forests and diversion of forest land for non-forest use. It describes the penalties for contravention of the provisions of the Act. If forest land has to be acquired for the project, clearance is required from the Forest Department. No forest land is required for the subproject. Hence, this is not applicable. Not Applicable

C. ASIAN DEVELOPMENT BANK'S ENVIRONMENTAL SAFEGUARD POLICY PRINCIPLES

6. Since the proposed HPSPDP is being funded by the ADB, it has to comply with ADB's SPS, 2009, in addition to the India's own environmental laws and regulations. The environmental safeguard policy principles embodied in SPS, 2009 aim to avoid adverse impacts on the environment and on affected people or communities; minimize, mitigate and/or compensate for adverse project impacts, if unavoidable; help borrowers to strengthen their safeguard systems and to develop their capacity in managing the environmental and social risks. The SPS, 2009 categorizes all projects into 3 environmental categories (A, B or

C) based on their potential impacts⁴. Similarly, ADB's REA checklist method was followed to assess the potential impact of this MCC subproject (**Annexure-1**). As explained below, the subproject has been categorized as 'B'. Accordingly, this IEE has been prepared to address the potential impacts in line with the requirements for category B projects. The IEE was based mainly on baseline data generation on environmental parameters and secondary sources of information and field reconnaissance surveys. Stakeholder consultations at the three sites were an integral part of the IEE. An Environmental management plan (EMP) outlining the specific environmental measures to be adhered to during implementation of the MCC subproject is included in the IEE.

D. Review and Approval Procedure

7. For Category 'B' projects, the draft environmental status report is reviewed by the relevant ADB Departments and the Executing Agency (EA). Additional comments are incorporated into the final documents as relevant. These are reviewed by the EA and ADB safeguards team. The Executing Agency then officially submits the IEE report to ADB for consideration by the Board of Directors. The final report is made available worldwide by ADB, via the depository library system and the ADB website.

E. Report Structure

8. This Report contains eight sections including this introductory section: (i) Introduction; (ii) description of project components; (iii) description of the existing environment around the sub-project; (iv) Environmental impact and mitigation measures; (v) EMP; (vi) processes for public consultation and information disclosure; (vii) findings and recommendations; and (viii) conclusions.

⁴ As per SPS 2009, projects are assigned to one of the following four categories: (i) **Category A**. A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment is required. (ii) **Category B**. A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination is required. (iii) **Category C**. A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed (iv) **Category FI**. A proposed project is classified as category FI if it involves investment of ADB funds to or through a FI (paras. 65-67).

II. DESCRIPTION OF THE PROJECT COMPONENTS

A. Components of the Sub-project

9. The location of the proposed MCC site and its surroundings are shown in **Figures 2 and 3**. **Table -2** summarizes the need for the sub-project, and its proposed components.

Figure- 2: Location of MCC Site at Nahan

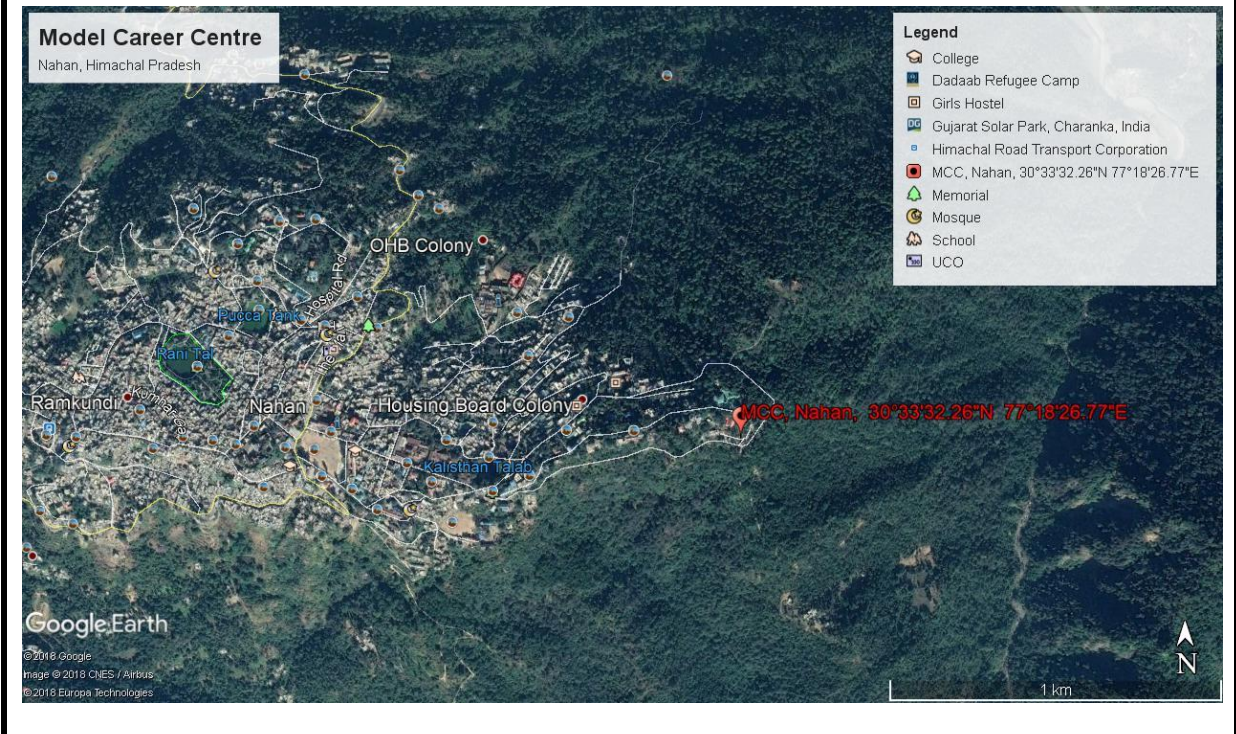


Figure-3: Geographic Location of Sub Project Site

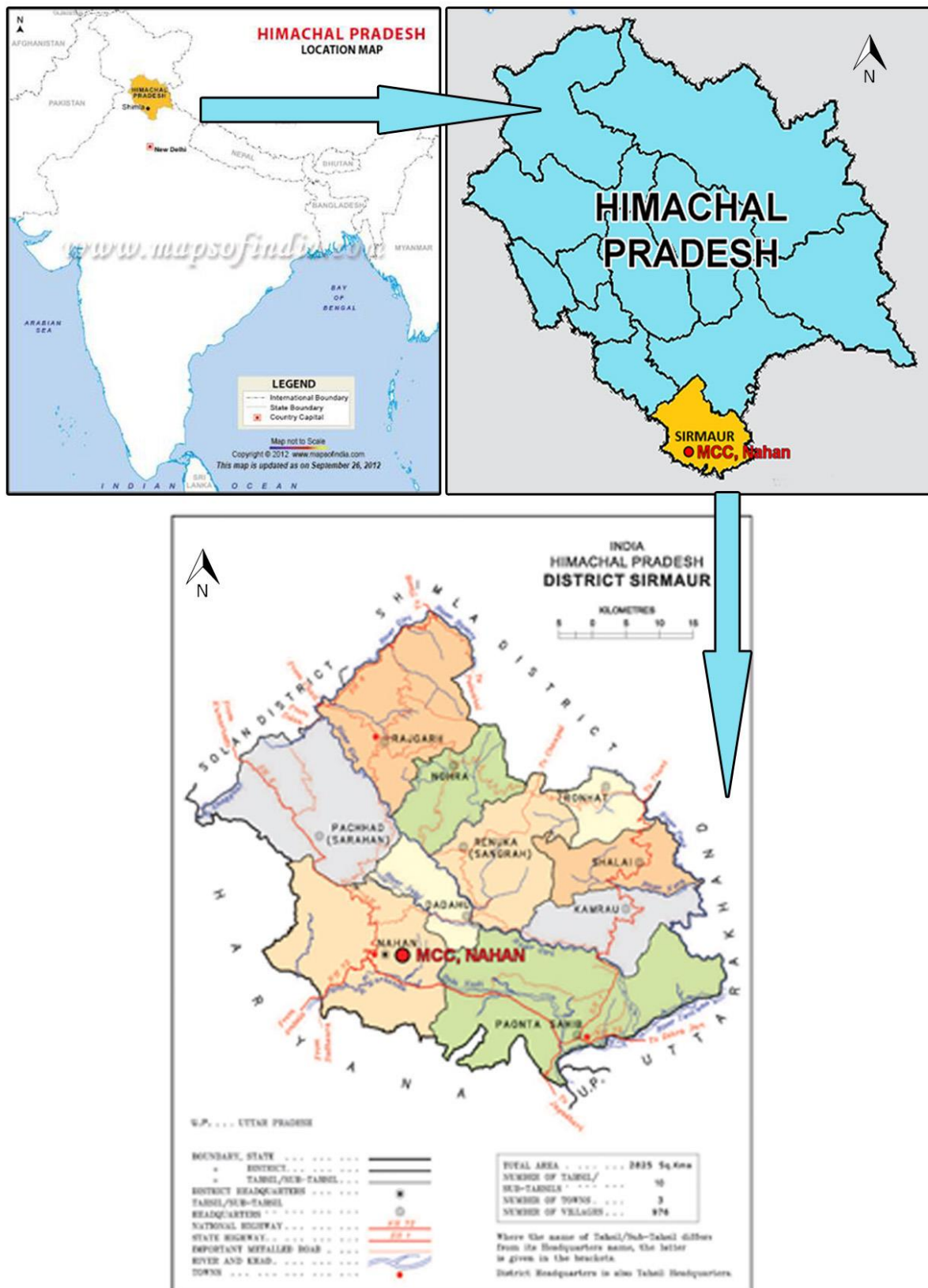
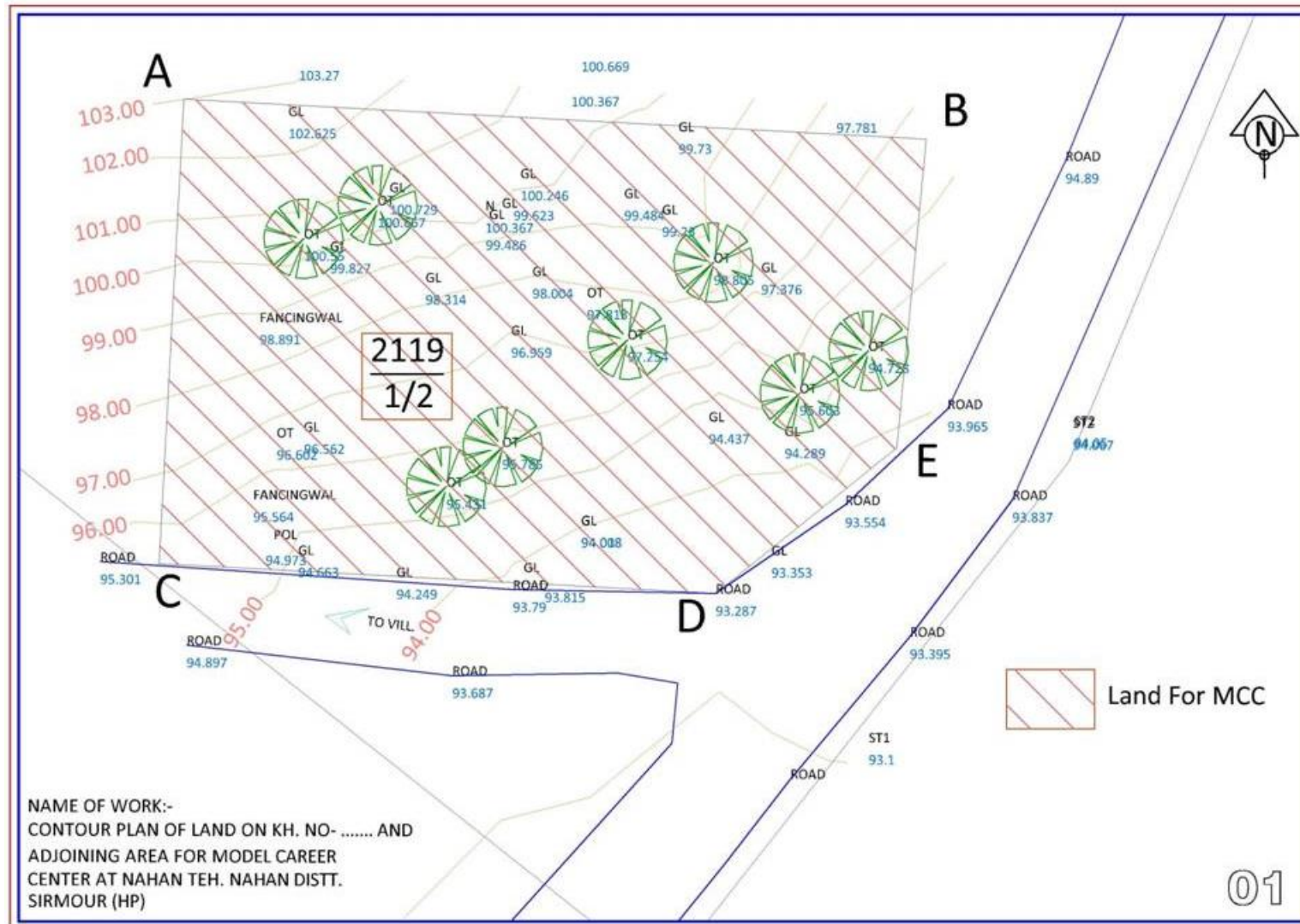


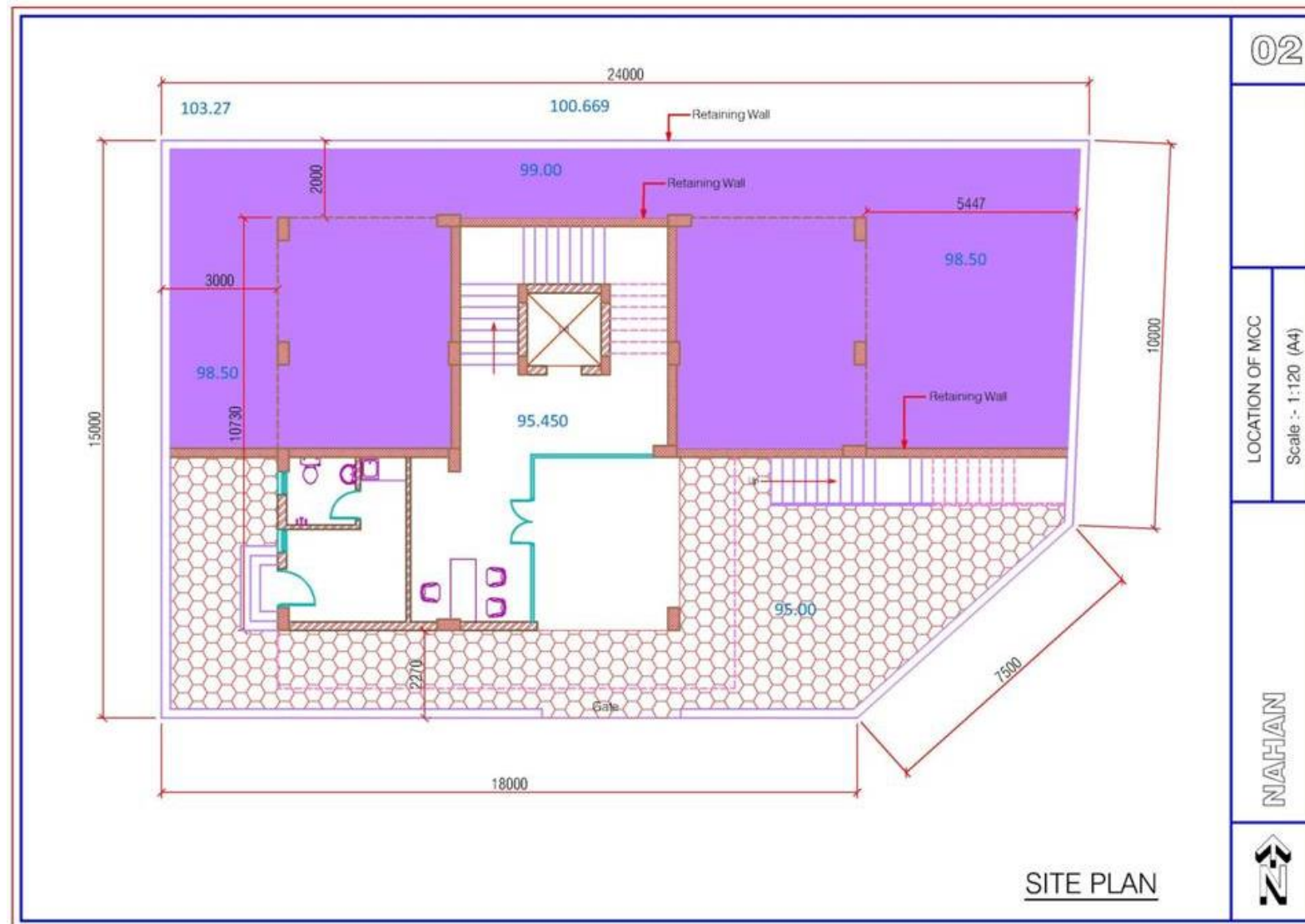
Table-2: Description of the Sub-project Components

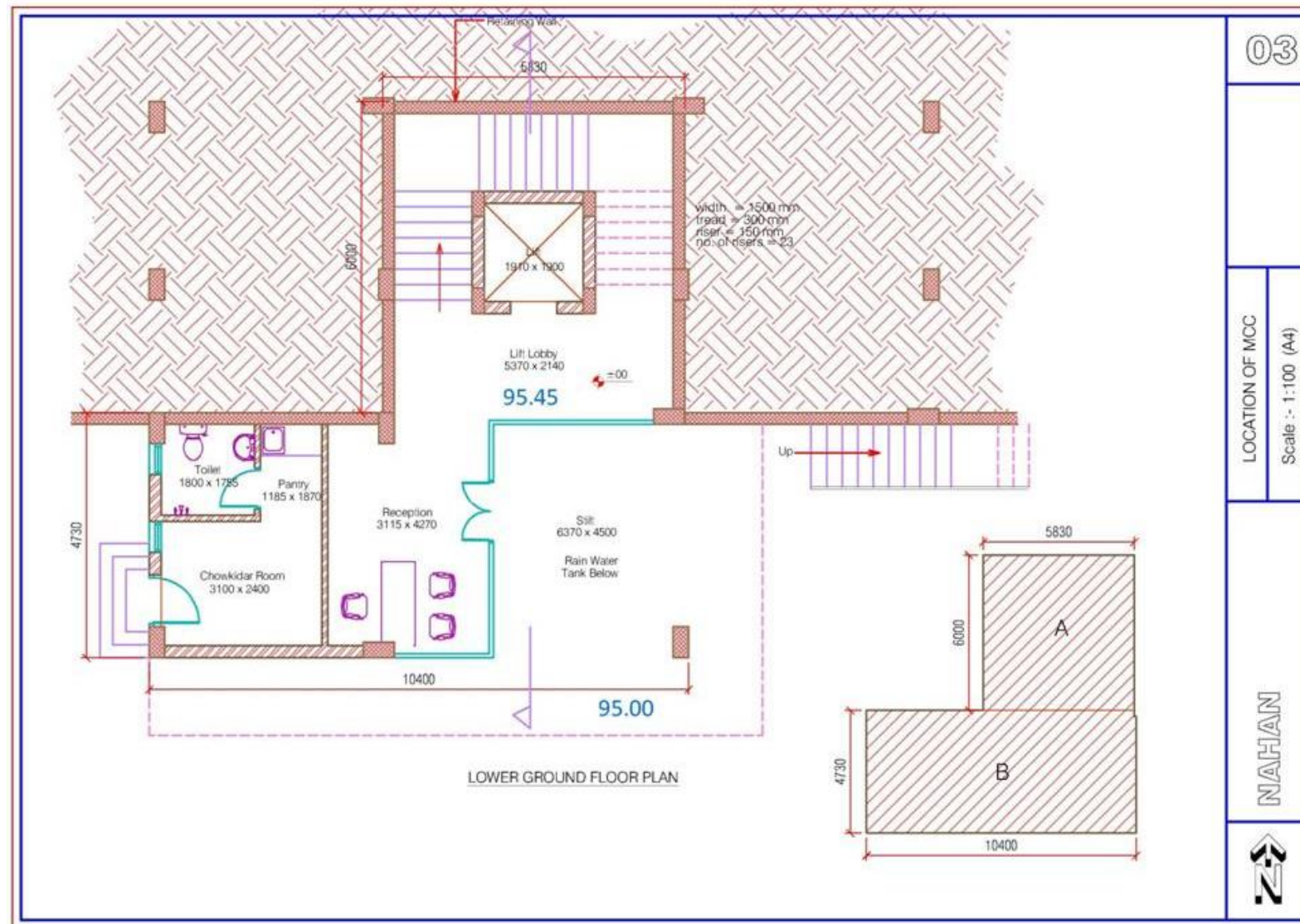
Description	Need of the Sub-project	Proposed Components
Establishment of MCC at Nahan	<ul style="list-style-type: none"> There is need for the Model Career Centers in Himachal Pradesh to guide Himachali youth for selection of jobs as well as act as an interface between the industry and skill manpower. The model career center will also keep records of employment and this data will help GOHP to plan educational and training facilities as per the emerging needs. 	<p>The main sub-project components include:</p> <ol style="list-style-type: none"> The MCC will be a four storey building having lower ground, upper ground, first and second floors. On the lower ground floor, there will be Chowkidar room, reception, Pantry and Toilet Block. On upper ground floor, there will be Information Technology Room, Centre Manager's Room, waiting lounge and Gents Toilet. The first floor will be partly be covered by Labor Office, and in balance portion, there will be two individual counseling rooms, Ladies Toilet and one group counseling room. The second floor will be covered by one Campus Interview Hall and Labor Office. A septic tank will be provided for 50 users. Solar panels will be installed on the roof. They will have the potential to generate 3 kVA of power. The total electricity load has been estimated as 25 kW at MCC Nahan. Water consumption has been estimated as 2500 liters per day. Water source will be from the municipal supply. The solid waste generated will be integrated with the waste disposal system of Nahan city. The estimated cost for MCC Nahan is INR 22.103 million.

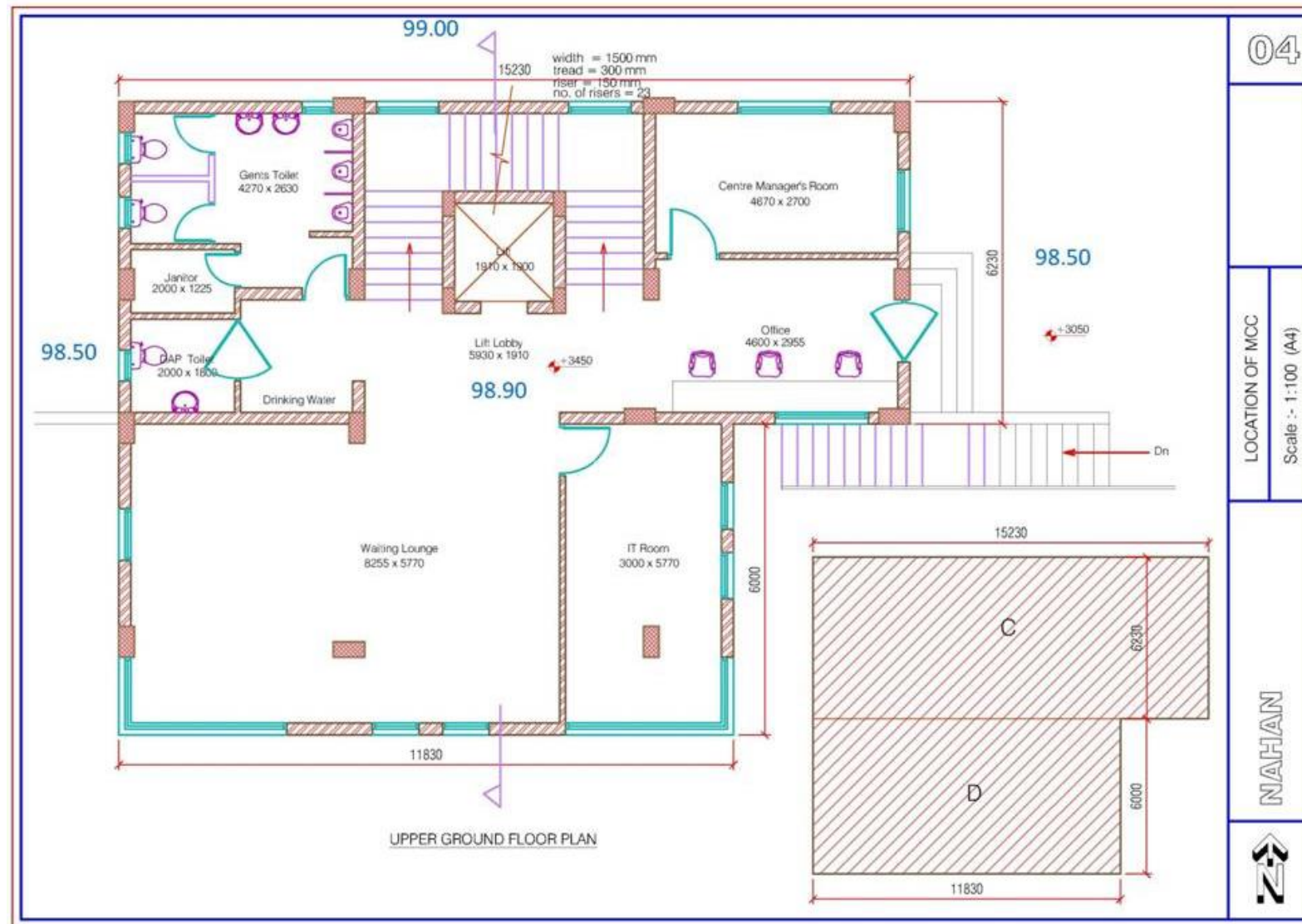
10. The layout plan for MCC Nahan for lower ground floor, upper ground floor, first floor, second floor and roof top along with 3D perspective view of MCC building is shown below in **Figure-4**.

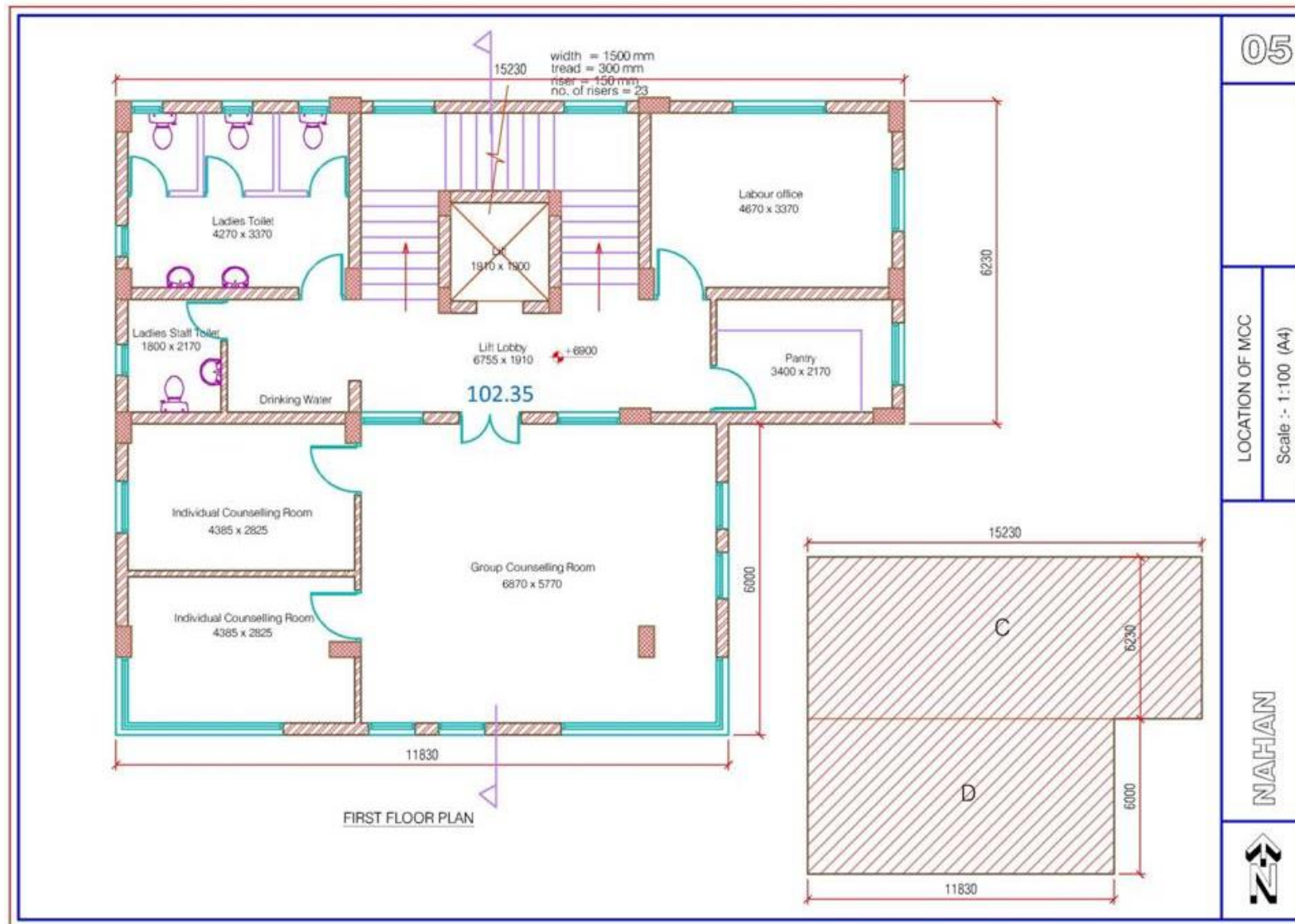
Figure-4: Layout Plan of MCC Nahan

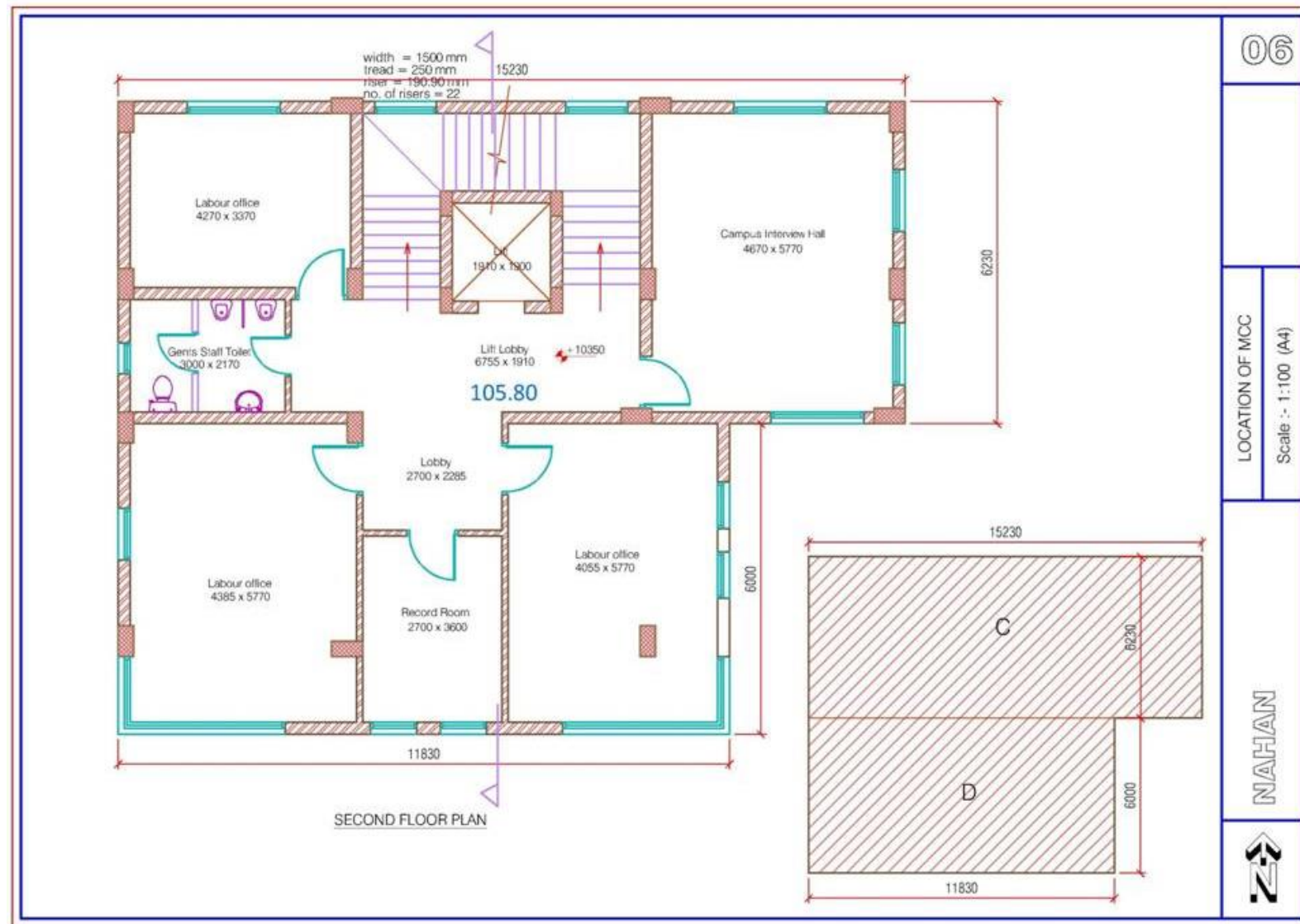


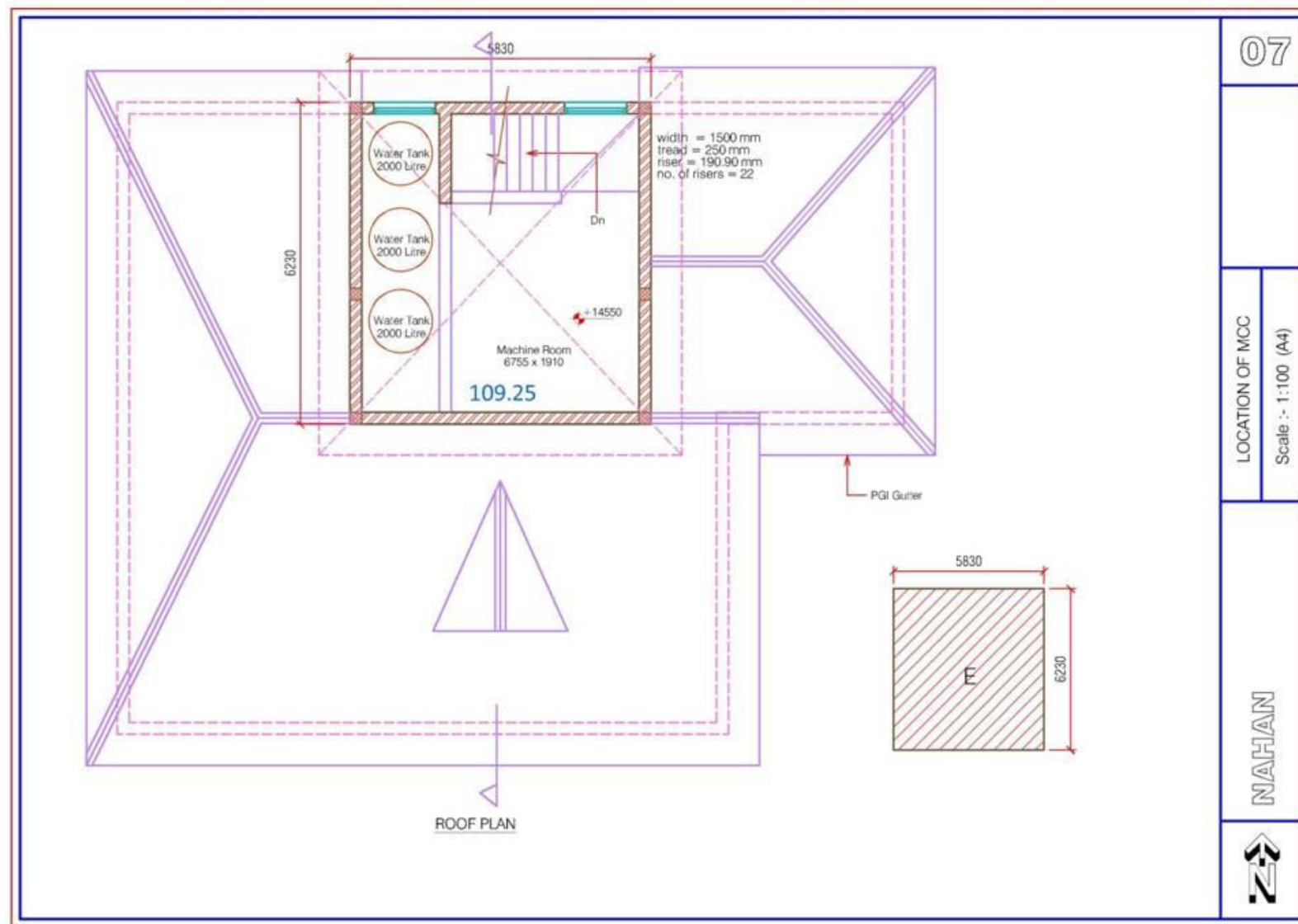


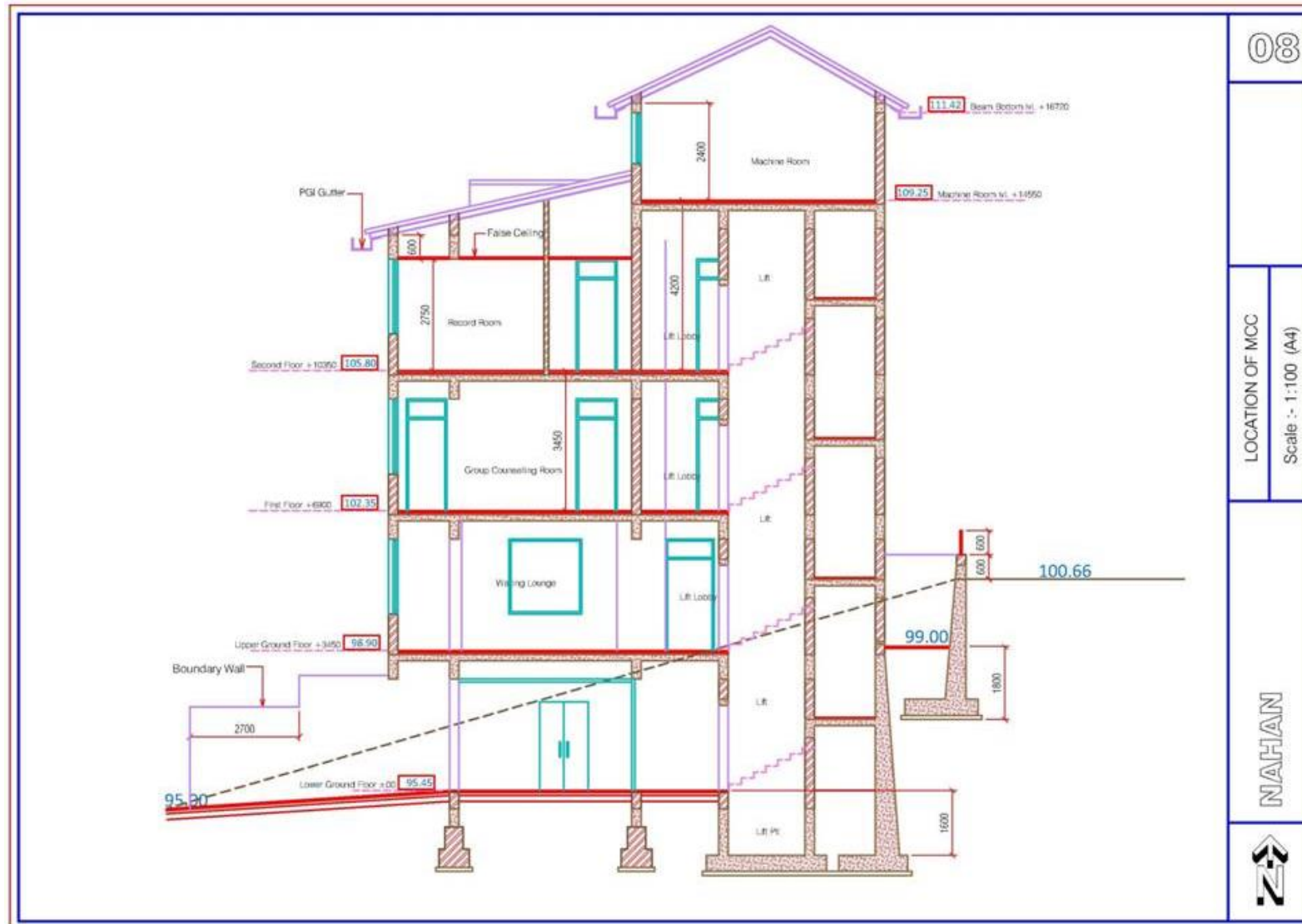








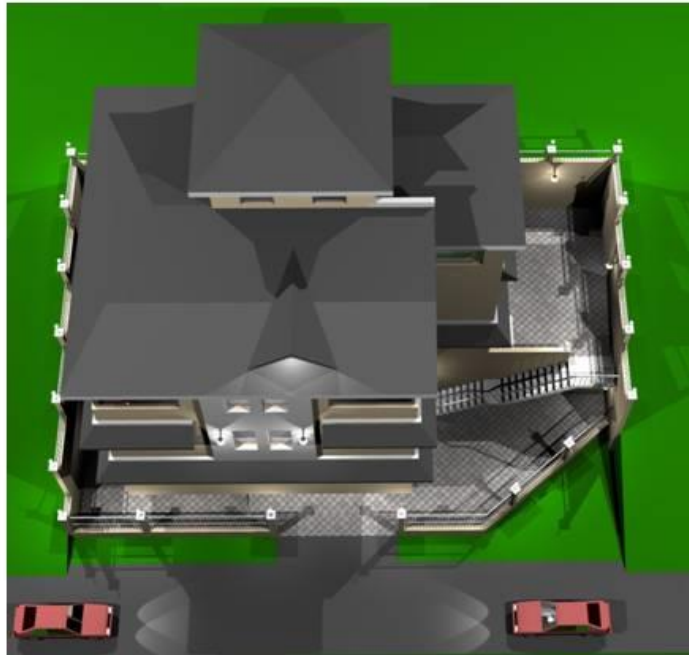






3D VIEWS





3D VIEW



B. Executing and Implementing Agencies

11. The Department of Planning (DOP), GOHP, will be the executing agency for the proposed HPSPD. The *Himachal Pradesh Kaushal Vikas Nigam* (HPKVN), the Department of Technical Education, Vocational & Industrial Training (DOTE), Department of Higher Education (DOHE), and the Public Works Department (PWD) will be the implementing agencies. HPKVN will also operate as the project management unit (PMU) for the overall project. For the civil works component, it will be assisted by PWD officials who are well aware of the state's and India's building codes and environmental rules and regulations. HPKVN and PWD will be responsible for overall planning and implementation of the civil works. They will ensure that the ESMF is adhered to during project implementation. The Project Management Consulting (PMC) firm to be engaged under the proposed loan will have experienced Environment and Social Safeguards specialists. They will assist PWD and HPKVN in supervising the civil works, ensuring that the IEEs and EMPs are prepared for all sub-projects, and preparing semi-annual safeguards monitoring reports. HPKVN will consolidate the semi-annual reports, and submit them to ADB. ADB will post the environmental monitoring reports on its website.

C. Implementation Schedule

12. The implementation period for the MCC Nahan subproject is 24 months. The preliminary drawings for MCC Nahan have been prepared for approval and these are in approval process. The bidding process for the sub-project will be started by April 2019. The MCC sub-project will be awarded for construction by June/July 2019. The contractor is expected to be mobilized to site by July/August 2019 and construction works of sub-project will begin in August 2019, and work will be completed by July 2021.

III. DESCRIPTION OF THE EXISTING SUB-PROJECT ENVIRONMENT

13. This section presents a brief description of the existing environment around the MCC sub-project site at Nahan, including its physical resources, ecological resources, socio-economic development and social and cultural resources. Broad aspects on various environmental parameters such as geography, climate and meteorology, physiographic, geology, seismology, ecology, socio-cultural and economic development parameters that are likely to be affected by the proposed sub-project are presented. Secondary information was collected from relevant government agencies like the Forest Department, State Environment Department, and State Pollution Control Board, and Meteorological Department.

A. Environmental Profile

Air and Noise Quality

14. No major air pollution sources have been seen in the surroundings of influence area of MCC subproject site. The site is located in built up area. The subproject site is not close to any National Highway or State Highway. Traffic on the local road connecting to site is low. Hence, insignificant vehicular emission is expected. There is no industrial area close to site but there are Industrial areas at Paonta Sahib and Kala Amb. The distances of these industrial areas are about 17 km for Kala Amb and about 43 km for Paonta Sahib. The ambient air quality and noise data for the sub-project site is not available. The data from secondary sources has been obtained for Sirmaur district. The ambient air quality data has been given below in **Table-3** and noise levels are given in **Table-4**:

Table-3: Ambient Air Quality Data for Project Area

Sl. No.	Location	Date	Parameter Value (µg/m ³)		
			SO ₂	NO _x	PM ₁₀
1	Kala Amb (Sirmaur district)	15-10-2014	BDL*	12	78
		23-10-2014	6	20	108
3	Applicable National Ambient Air Quality Standard		80	80	100
* BDL- Below Detection Limit Source: Ambient Air Quality and Noise Levels, Published by CPCB (Year 2017)					

Table-4: Ambient Noise Levels in Project Area

Sl. No.	Location	Noise Levels dB(A)	
		Day	Night
1	Kala Amb (Sirmaur District)	49	67
2	Ambient Noise Level Standards	55	45
Source: Ambient Air Quality and Noise Levels, Published by CPCB (Year 2017)			

15. However, the levels are expected to be well within the stipulated limits since there are no sources of air or noise pollution near the MCC site. Ambient air quality monitoring and noise level monitoring will be conducted by the contractor prior to start of construction works with an aim of establishing baseline conditions.

16. It was observed that ambient air quality is well within the limits for all parameters

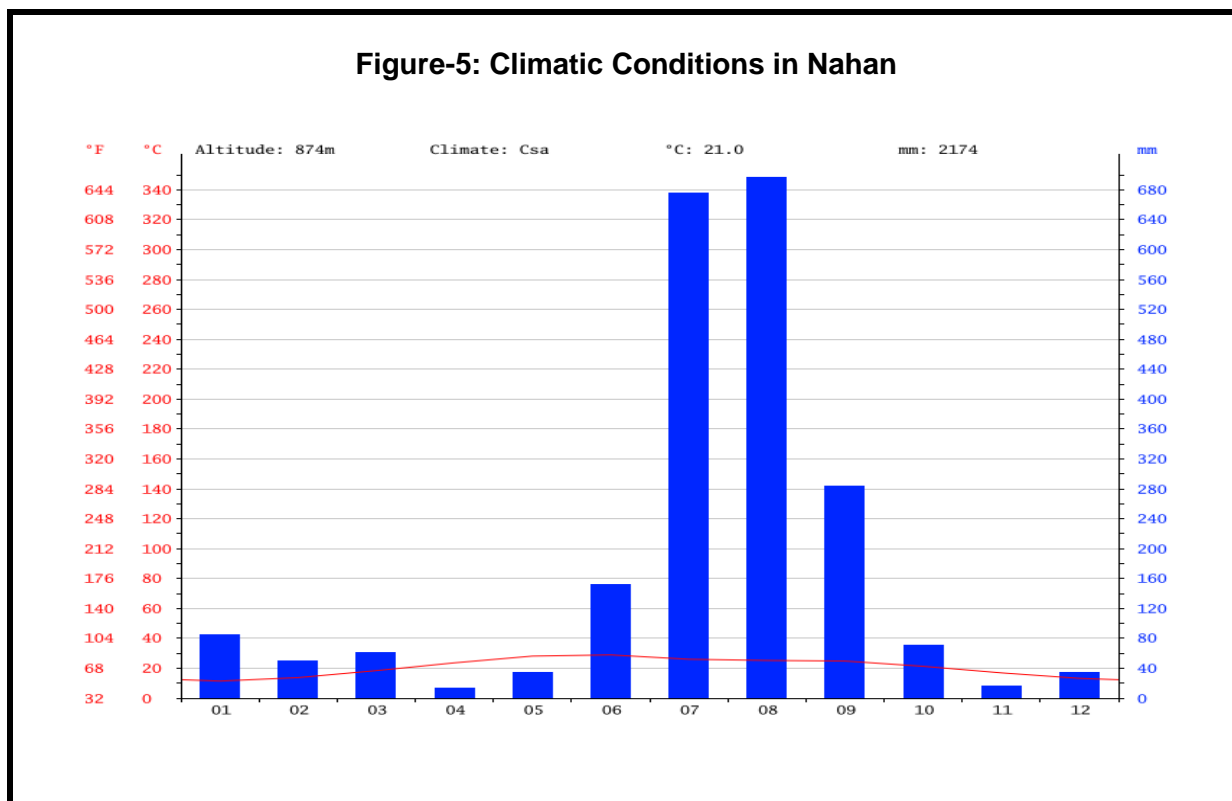
except PM₁₀ at Kala Amb. The levels at Kala Amb are higher because it is an industrial area. The values at sub-project site are at expected to be within limits as there are no commercial or industrial areas near the site. The noise level data for sub-project site is not available. Ambient air quality Noise level monitoring will be conducted by the Contractor prior to start of construction prior to establish baseline conditions.

17. **Climate.** There are four broad seasons in sub-project area. Winter normally starts from mid-November and continues till mid-March. December, January and February are severe cold months, when the winter season is at its peak.

18. From mid-March to mid-May, climate in most parts of the district is at its bloom because of the delightful spring. The nights are colder. The climate is comparatively hot from mid-May to mid-July. The places situated in the lower reaches on the banks of rivers and streams are as hot as plains. Rainy season generally starts from mid-July and extends up to the mid-September. Autumn season is generally very small from mid-September to mid-November. The extended rainy season and early setting of winter are the reasons for its short duration.

19. **Temperature.** The temperature exhibits seasonal variation with minimum during the winter and higher during the summer. April, May, June and July are the hottest months while January, February and December are the cold months. The maximum temperature rises to about 35°C and the minimum temperature falls to about -12.0°C at higher heights in the project districts.

20. **Rainfall.** The sub-project area experiences maximum rainfall during Monsoon season from June to September while as least Rainfall is received in November and December. There is no snow fall in the subproject district. The climatic conditions for Nahan have been depicted in **Figure-5** below:

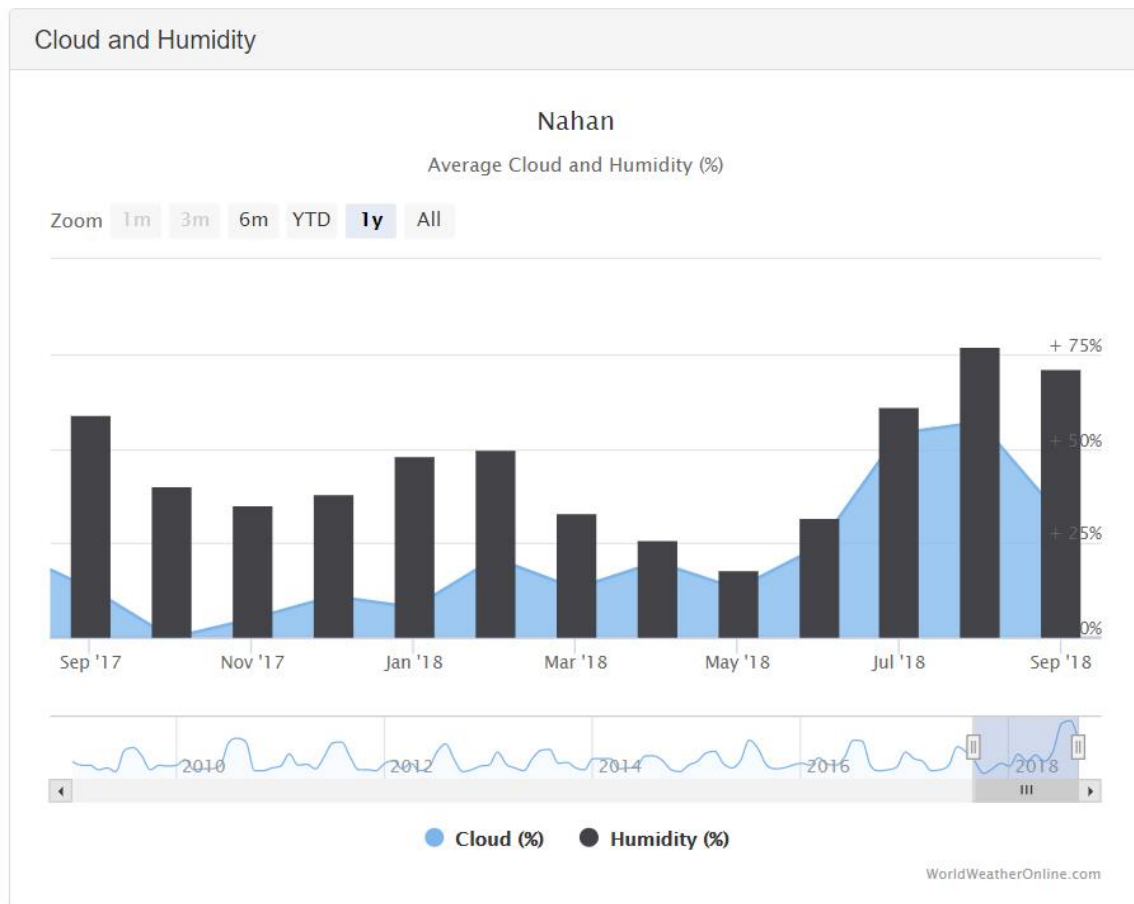


Source: <https://en.climate-data.org/asia/india/himachal-pradesh/nahan-175602>

21. **Humidity.** Based on long-term climatologically data of subproject region, it is found

that relative humidity increases rapidly with the onset of monsoon and reaches maximum (around 80% in the morning and 70% in the evening) during August, when peak monsoon period sets in. Relative humidity is the minimum during the summer months (from April to June) with May being the driest month (20% in morning and 30% in evening). Skies are heavily clouded during the monsoon months and for short spells when the project area is affected by Western Disturbances. The monthly humidity variation for project districts is given below in **Figure-6**.

Figure-6: Humidity Variation in Sub- Projects Area



Source: <https://en.climate-data.org/asia/india/himachal-pradesh/nahan-175602>

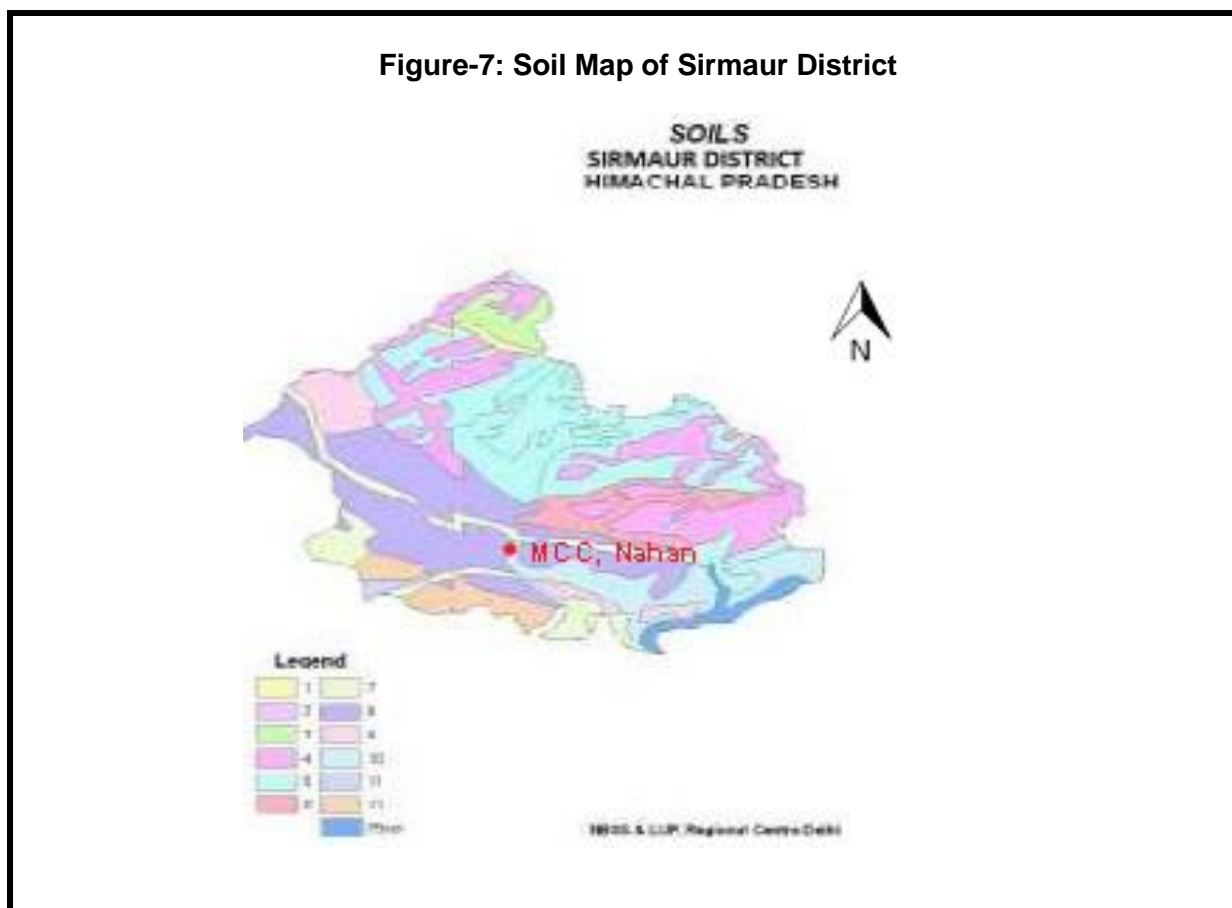
22. **Wind Speed and Directions.** Two broad wind patterns are observed in the project area viz. South-East to North-West (January to May) and south westerly to north easterly (June to October). The average wind speed is in the range of 0.30- 3 m/s at Nahan.

Topography and Soils

23. The Sirmaur district of subproject location has mountainous topography. This district presents an intricate mosaic of high mountain ranges, hills and valleys with altitude ranging from 300 to 3000 m above MSL. There is general increase in elevation from south to north and from east to west. In general trance Giri terrain exhibits highly rugged mountain terrain. The highest peaks in Chaurdhar remain snow bound throughout the year. Low denuded hill ranges of Siwalik represent the southwestern part of the district. In the areas underlain by

high hill ranges of Himalayas, the valleys are narrow and deep with steep slopes. The elevation of the MCC site is 790 m above mean sea level.

24. Soil is generally rich deep alluvial in valley areas of the Sirmaur district and in rest of the hilly and mountainous areas soil is skeletal. The soil depth is generally shallow except in areas having good vegetative cover. It is generally dry, shallow and deficient in organic matter. Landslides are the common features in mountainous terrains. Soils are rich in nutrients and thus are fertile. The soils are generally brown, alluvial and grey brown Podzolic. In the hilly area i.e. northern part soils are veneer and brown in color, these are high base status soil of humid regions. In the southern part, combination of shallow black, brown and alluvial soils are found. The soil map of the district is shown in **Figure-7**.



Source: Himachal Pradesh Contingency Plan (District Sirmaur), Government of Himachal Pradesh (2008-2009)

Surface water and Ground water

25. The sub project site at Nahan is located in catchment area of Yamuna River. There is no stream or river close to Nahan MCC site. No flooding has been recorded in MCC site and surroundings. To establish baseline scenario, ground water quality data was obtained from the Central Ground Water Board. The water quality data for the sub -project site is given below in **Table-5**:

Table-5: Ground Water quality in Sub-Project Area (Nahan)

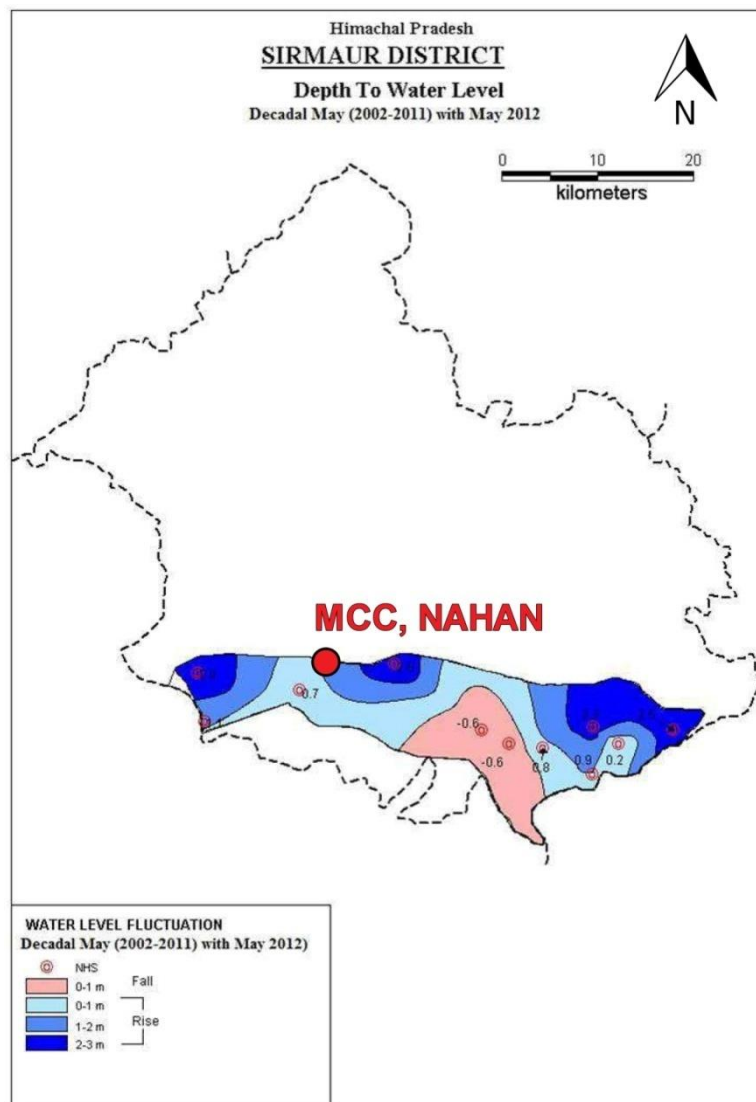
Parameter	pH	EC μS/cm at 25°C	HCO ₃	Cl	NO ₃	F	Ca	Mg	Na	K	K Total Hardne ss as CaCO ₃
		in (mg/l)									
Min	7.23	328	277	22	2.1	0.26	36	8.5	18	2.3	59
Max	8.00	816	499	159	88	0.78	104	27	294	8.2	634
Drinking Water Quality Standar ds	6.5- 8.5	No limit specifi ed	No limit specifie d	1000	45	1.5	200	100	No limit spec ified	No limit specifi ed	600

Source: Source: District Ground water Brochure District Sirmaur-Central Ground Water Board (Year 2013)

26. Due to the absence of any water polluting sources at Nahan MCC site and surroundings, it is clear that all parameters of water quality are within the permissible limits, specified by Bureau of Standards (BIS), for drinking and irrigation. The water quality monitoring will be conducted by the contractor prior to the start of construction works.

27. Based on 2012 data, the depth of water level during pre-monsoon months, at Nahan, ranged from 3.76 to 43.98 m below ground level (bgl). During post- monsoon months, it ranged from 2.98 to 37.35 m bgl. The variation of ground water table depth has been shown in **Figure-8** for Sirmaur district. It is clear from this Figure that In general, fall in water level up to 2 m is observed in most part of the valley. However, in isolated pockets in western and eastern part of Paonta valley rise of water level up to 5 m is also observed. The stage of ground water utilization in Kala Amb valley area (Nahan CLC site) of Sirmaur district is 56.46% and falls in the exploited category.

Figure-8: Ground water Depth Variation Map in Sirmaur District



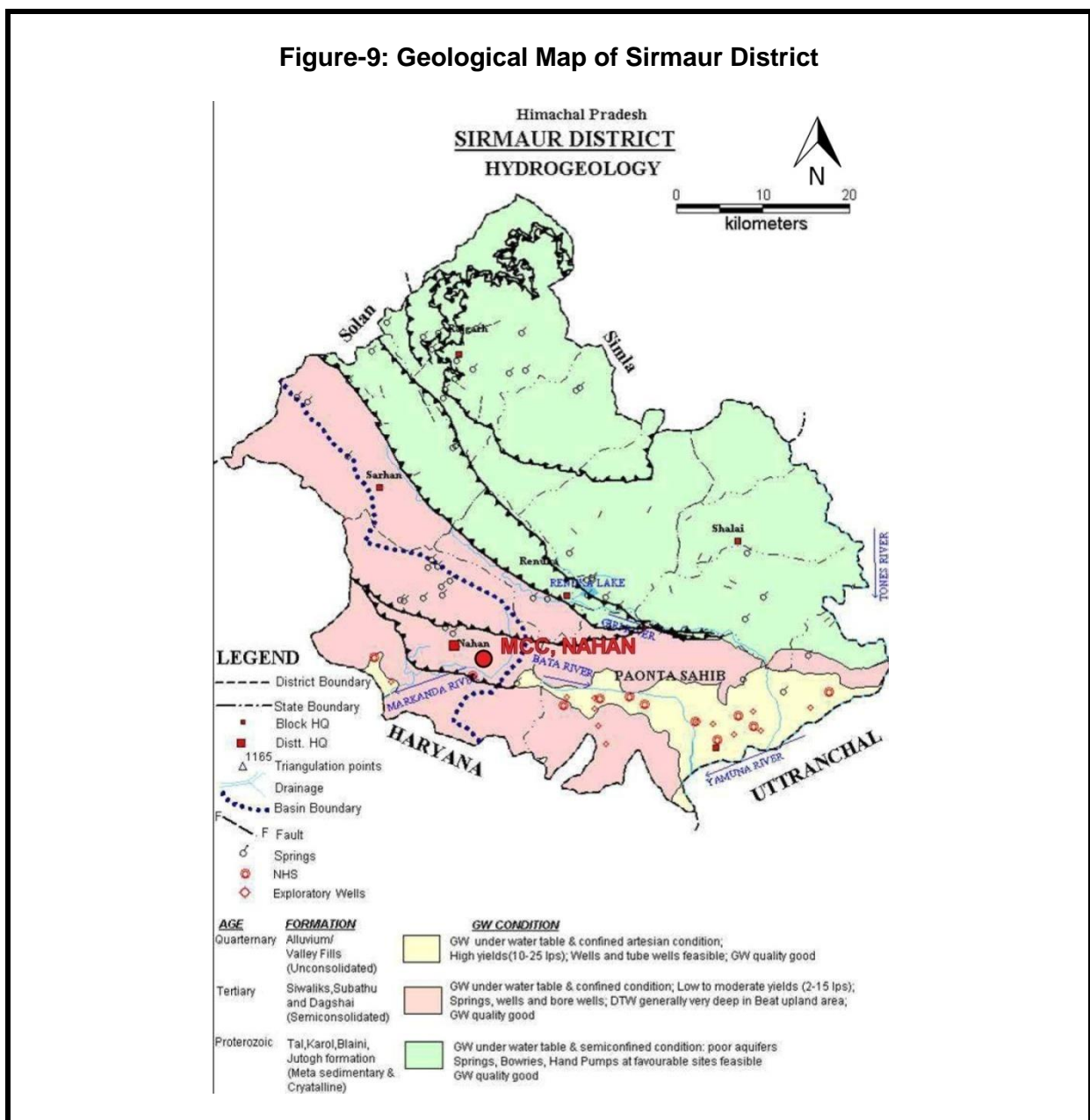
Source: District Ground water Brochure District Sirmaur-Central Ground Water Board (Year 2013)

Geology and Seismology

28. In Himachal Pradesh, geological history goes back to the Archaean Proterozoic transition although the actual Himalayan Mountain building took place only during Cenozoic era. The Himalayas are a classic example of continent and continent collision due to convergent movement of Indian plate towards the Eurasian plate. It comprises two contrasting tectogens with their own distinctive geological history. The dividing lines between these two tectogens represent a major tectonic discontinuity and are designated by several local names. However, it can be collectively refer to as a main central thrust and on either side of this thrust the tectogens display contrasting stratigraphic and tectonics features indicating convergence of two alien blocks. These are the lesser Himalayan tectogens and the Tethys Himalayan tectogen.

29. The Siwalik Group in the Himachal Himalaya forms a parallel foot- hill belt in the sub-Himalayan zone, extending along the southern margin of the Palaeogene Sirmour group belt from the Ravi to the Yamuna. Within Himachal Pradesh, the Himalaya has maximum width

between Hoshiarpur and Jogindernagar. The Siwalik sediments, though occurring as an independent structural belt, are also seen to overlies the Muree in the Jammu sector of the Kashmir Himalaya and the Kasauli in the Himachal Himalaya. Pilgrim (1910) recorded a gradual transition from Muree beds to Lower Siwalik in the Rawalpindi and Jhelum districts of Pakistan and from Kasauli to Lower Siwalik (Nahan) in the Himachal Himalaya. This fact assumes importance because there is a tendency to ignore this normal relationship between the Siwalik and Sirmour Groups at Dharmshala, Sarkaghat and Nalagarh. At Haritalyanagar near Bilaspur, the Lower Siwalik is seen resting on the Dagshai with an unconformity, which is described as the most striking discordance in the whole sequence of fresh water deposits and evidently representing a period of considerable earth movements (Pascoe, 1964). The main tectonic elements of the project region include the central thrust, and boundary fault. Several NE-SW lineaments are also known from the area and these traverses across different tectonic zones. Seismically, the State constitutes one of the most active domains of the Himalayan region. The geological map of Sirmour district has been given in **Figure-9** below:



Source: District Ground water Brochure District Sirmour-Central Ground Water Board (Year 2013)

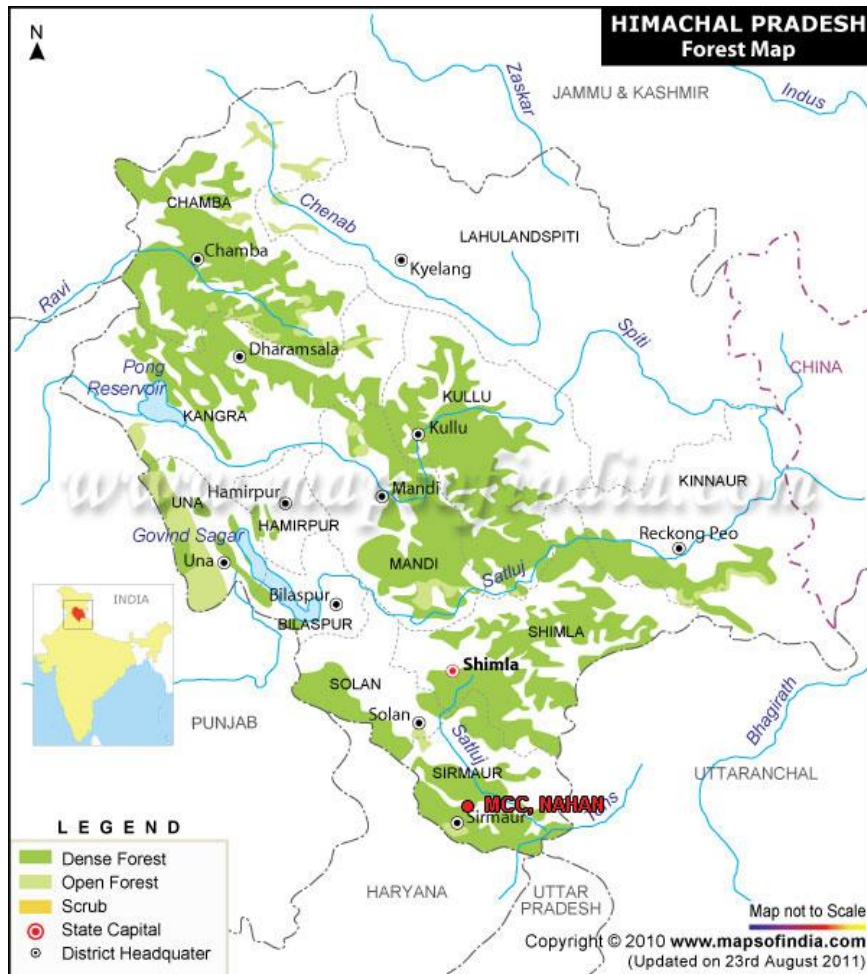
30. India's seismic code divides the country into five seismic zones (I to V). The sub-project stretch comes under seismic zone V as defined by Urban Earthquake Vulnerability Project (UEVP) and the Atlas prepared by the Building Materials Promotion and Technology Council (BMTPC), Government of India and UNDP [IS 1893 (Part I : 2002)]. All structures have been designed considering seismic zone V. It may be mentioned that intensity of earthquake increases from Zone I to V. The Zone V mainly covers Himalayan region in India and Himachal Pradesh being a hilly state lies in Himalayan region. Zones I, II and III mainly cover Central and Southern parts of Indian peninsula. It may be mentioned that after an earthquake of 7.8 intensity on Richter scale in Kangra district in 1905 no major earthquake has occurred in Himachal Pradesh.

B. Ecological Resources

Forests

31. Forests in Himachal Pradesh currently cover an area of nearly 37,691 square kilometers (14,553sq.miles), which is about 38.3% of the total land area of the state. The variation in the landscape has created great diversity of flora and fauna. From the snowbound peaks of the Himalayas to the moist Alpine scrub, sub Alpine forests, dry - temperate and moist- temperate forests to moist deciduous forests, the state possesses a wide biodiversity that in return nurtures a large multiplicity of floral and faunal forms. Reserve Forests constitute 71.11%, Protected Forests 28.52% and Un-classed forests constitute 0.35% of the total forest area. Kangra district has about 66.23 % of its geographic area under forests and most of it is managed by the Forest Department. The forests of the district can be classified into six main categories namely: (1) the tropical dry deciduous forests, (2) the sal forests (3) the chir forests, (4) the oak forests, (4) the deodar, fir and spruce forests, and (5) the Alpine pastures. Forest cover map is shown in **Figure -10**.

Figure-10: Forest cover Map of Himachal Pradesh



Source: State Forest Department (Year 2018)

32. The MCC sub-project site does not fall within any reserved, protected, or revenue forest. The complete vegetation of Himachal Pradesh relies on two factors - height and rainfall. The southernmost part of the state is at a lower altitude level and it contains both humid and subtropical dry broadleaf woodlands, along with subtropical moist broadleaf forests. The majority of area is covered by Himalayan subtropical broadleaf forests. Apart from this, the state has some of the vegetation which is abundant with sal, sisham, and chirpine, dry deciduous and moist broad-leafed forests. The landscape which falls in temperate regions has trees like oak, deodar, blue pine, fir and spruce. The trees found in higher elevations include Alders, birches, rhododendrons and moist alpine scrubs.

33. Himachal Pradesh has abundant growth of fruits like apple, peaches, plums and berries. It is rightly called the 'fruit bowl of India'. There are plenty of fruit orchards and fruits are exported to various parts of the country and abroad. The pleasant climate also helps numerous flower varieties like gladiolas, lilies, chrysanthemums, roses, marigolds, carnations, etc. to grow in abundance. The subproject site does not have any fruit bearing trees. The trees noted at subproject site include 1 Kokat, 2 Bel, 1 Pine, 1 Bamboo Grove, and 1 Kachnar Tree. None of these is scheduled tree.

34. Himachal Pradesh is home to approximately 1200 birds along with 359 animal species. This includes leopards, ghoral, snow leopard, musk deer (state animal), and

Western Tragopan (state bird). The state is an ideal tourist destination for animal lovers as it hosts 12 main national parks and sanctuaries. It has two major national sanctuaries -the Great Himalayan National Park and the Pin Valley National Park.

35. Since the sub -project site is located within the urban habitation of Nahan; therefore, there are no protected areas in 10 km radius. Around the sub-project site, one only finds domesticated fauna and common trees such as shisam, mango, neem, and sal.

36. The water bodies around sub project site have not been seen. Hence, it can be said that there are no aquatic life concerns in the subproject.

Protected Areas

37. The list of protected areas (National Parks and Wildlife Sanctuaries) in Himachal Pradesh is given in **Table 6**. It is clear from this table that there are three protect dares in Sirmaur district, but these are located more than 20 km away from the proposed MCC subproject site.

Table-6: Protected Areas in Himachal Pradesh

Sl. No.	Sanctuaries	District	Area (km²)
1	Bandli	Mandi	32.11
2	Chail	Solan	16
3	Chandra Tal	Lahaul & Spiti	38.56 +(11.53 for Consideration)
4	Churdhar	Sirmour	55.52
5	Daranghati	Shimla	171.50
6	Dhauladhar	Kangra	982.86
7	Gamgul-Siyabehi	Chamba	108.40
8	Kais	Kullu	12.61
9	Kalatop-Khajjar	Chamba	17.17
10	Kanawar	Kullu	54.27
11	Khokhan	Kullu	14.94
12	Kibber	Lahaul & Spiti	2220.12
13	Kugti	Chamba	379
14	Lipa Asrang	Kinnaur	31
15	Majathal	Solan	30.86
16	Manali	Kullu	29
17	Nargu	Mandi	278
18	Pong Dam Lake	Kangra	207.59
19	Rakchham-Chitkul	Kinnaur	304
20	Renuka	Sirmour	4
21	Rupi-Bhaba	Kinnaur	503
22	Sechu-Tuan Nalla	Chamba	390.29
23	Sainj	Kullu	90
24	Shikari Devi	Mandi	29.94
25	Shimla Water Catchment	Shimla	10

Sl. No.	Sanctuaries	District	Area (km ²)
26	Simbalbara	Sirmour	27.88
27	Talra	Shimla	46.48
28	Tirthan	Kullu	61
29	Tundah	Chamba	64
30	Water Supply Catchment	Shimla	10
National Parks			
1	Great Himalayan National Park	Kullu	765
2	Pin Valley National Park	Lahaul & Spiti	675
Conservation Areas			
1	Shilli Conservation Reserve	Solan	1.49
2	Shri Naina Devi Conservation Reserve	Bilaspur	17.01
3	Darlaghat Conservation Reserve	Solan	0.67

Source: Himachal Pradesh State Forest Department (Year 2017)

C. Economic Resources

Industries

38. Being a hilly state, Himachal Pradesh has few large scale industrial units. As shown in **Table-7** for Sirmour district, there are micro, small, and medium enterprises focusing on agro-products, leather, textiles, wood, etc.

Table-7: Details of Existing Micro and Small Enterprises and Artisan Units in Sirmour District

NIC Code No	Type of Industry	Number of Units	Investment (Lakh Rs.)	Employment
20	Agro based	5	902.16	66
22	Soda water	-	-	-
23	Cotton textile	-	-	-
24	Woolen, silk & artificial Thread based clothes.	-	-	-
25.	Jute & jute based	-	-	-
26.	Ready-made garments & embroidery	-	-	-
27.	Wood/wooden based furniture	-	-	-
28.	Paper & Paper products	-	-	-
29.	Leather based	13	1171.04	569
31.	Chemical/Chemical based	41	19202.56	1206
30.	Rubber, Plastic & petro based	4	812.28	86
32.	Mineral based	-	-	-
33.	Metal based (Steel Fab.)	1	842.41	42
35.	Engineering units	9	2127.82	260
36.	Electrical machinery and transport equipment	7	399.76	73

NIC Code No	Type of Industry	Number of Units	Investment (Lakh Rs.)	Employment
97.	Repairing & servicing	-	-	-
01.	Others	109	7749.63	997

Source: Government of Himachal Pradesh, District Industry Centre, Sirmaur (Year 2014)

Transportation

39. The MCC subproject site is well connected with Shimla, Chandigarh, and other destinations in Himachal Pradesh. The nearest rail head for MCC Nahan site is at Yamuna Nagar at a distance of 68.3km. The nearest operating airport is Chandigarh from the subproject site at a distance of 87 km. Since MCC site is at a significant distance so no regulatory permission is required from the Airports Authority of India for the construction and operations of MCC.

Land Use

40. A study of the land use (**Table-8**) shows that majority of the area of the subproject district is under forest cover and land under cultivation. The land under permanent pastures and grazing is also significant. The barren land area in both districts is quite low. The land use of subproject site is urban area. If land use of sub project sites is to be seen in terms of classification of **Tables 8**, it will fall 'non cultivation category'.

Table-8: Land Use Pattern of Sirmaur District

Land use	Area (In 000' hectare)
Geographical Area	224.80
Net Area Shown	40.80
Forests	48.30
Land under non cultivation	37.30
Permanent Pastures and other Grazing land	57.0
Culturable waste land	15.90
Land under Miscellaneous use, tree, crop, etc.	10.50
Barren and unculturable land	8.50
Current Fallows	3.90
Other fallows	2.5

Source: District Census Handbook 2011(Sirmaur District)

41. **Agricultural Development.** Agriculture is the main occupation of the people in Sirmaur district. However, intensive cultivation is not possible as significant part of district is mountainous. Agricultural activities are common on the gentle hill slopes and in relatively plain, broad river valleys. Fruits and cash crops are a major source of income. The chief food crops cultivated include wheat, maize, rice, barley, seed-potato, ginger, vegetables, vegetable seeds, mushrooms, chicory seeds, hops, and fig.

Electrification

42. There is 100 % rural electrification in Sirmaur district where MCC subproject is planned.

Social and Cultural Resources

Population and Communities

43. As per 2011 census, population of the Sirmaur district is 5,29,855 persons with 188 person per sq. km density of population. The rural & urban population is 4, 72,690 (89%) & 57,165 (11%) respectively. The schedule caste and schedule tribes population in the district is 30.34 (%) & 0.02 % respectively. Male female sex ratio is 1000: 981.

44. The local inhabitants mainly depend on agriculture for their subsistence and adopt several traditional practices conducive for farming in sloping terrains. Large and small scale industrial units however have come up at Paonta valley. The sub project site at Nahan is located in Nahan Tehsil of Sirmaur district.

Health facilities

45. There are good health facilities in Nahan city and Sirmaur district in general. The Sirmaur district has 3 Government General Hospitals, 38 Primary Health Centers and one ESI Hospital. In addition to these, there are privately owned health facilities in the district.

Education facilities

46. There are good educational facilities in Sirmaur district. In this district there are 280 primary schools and 120 secondary schools. There are many number of education and technical training institutes major urban centers of the district. The current HSDP project will also contribute towards skills development and employability of Himachali youth.

Archaeological Resources

47. There are no heritage sites notified by Archaeological Survey of India (ASI) within or near the sub-project area. Similarly, no common property resources such as public wells, water tanks, play grounds, common grassing grounds or pastures, market areas and community buildings will be affected by the proposed subproject.

IV. ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

A. Environmental Impacts

48. Any project creating physical infrastructure will cause some minor impacts on the environment. This IEE examines the potential impacts anticipated during the construction and operation of the MCC at Nahan, including:

- (i) **Location impacts:** Impacts associated with site selection including effect on the environment and resettlement or livelihood related impacts on communities;
- (ii) **Design impacts and Pre-Construction Impacts:** Impacts arising from project design, including the technology used, scale of operations, discharge standards, topographic survey, geotechnical survey, etc.;
- (iii) **Construction impacts:** Impacts resulting from construction activities including site clearance, earthworks, civil works, etc.; and
- (iv) **Operation and Maintenance impacts:** Impacts associated with the operation and maintenance of the infrastructure built in the sub-project.

49. ADB's REA checklist for Buildings was used while screening the site and recommending mitigation measures.

B. Location Impacts

50. The proposed MCC building will be constructed on unencumbered land owned by the Government of Himachal Pradesh. The site is in possession of Department of Labor and Employment (**Annexure- 2**). The land has neither been acquired, nor has anyone been displaced in anticipation of the proposed ADB project. There are no significant ecological resources in the surroundings of MCC site as it is within the urban habitation of Nahan city. There are no heritage sites notified by ASI or state archaeological department within the plot boundary of MCC or in the immediate surroundings (300m). No significant impacts can arise due to sub-project location as MCC building components will not impinge upon any area of ecological, archaeological or historical importance. The sub- project site will also not require change in land use as it is located in urban area.

51. The sub- project site is located within seismic zone V and even a small magnitude earthquake may damage MCC building.

C. Impacts during Design and Pre-Construction Phase

52. As noted above, the proposed site is owned by GOHP. There are no issues arising due to land acquisition or involuntary resettlement. There will be requirement to cut 6 trees (1 Kokat, 2 Bel, 1 Pine, 1 Bamboo Grove and 1 kachnar) to facilitate MCC building construction. These trees are not scheduled trees. Based on the environmental screening of the site, there are no significant adverse environmental impacts during the design and Pre-construction phases.

D. Impacts during Construction Phase

53. All construction activities to be undertaken at the MCC site will be approved by the PMU. The construction Phase impacts due to the proposed project components are generic to the construction activities. The EMP emphasizes on the construction impacts and necessary mitigation measures to be strictly followed by the contractor and supervised by the PWD and PIU. The key potential impacts are covered in the following paragraphs.

54. **Impact due to stock piles of construction materials.** Improper stockpiling of

construction materials in and around the MCC site could obstruct movement along access roads. Hence, due consideration will be given for proper materials storage on construction site. Stockpiles will be covered to protect from dust and erosion. Waste materials will be disposed off at identified and approved site.

55. **Disposal of construction waste.** The construction waste could lead to untidy conditions at site and may find its way to local drains and smaller local streams and siltation and obstruction to natural flow in these drains and streams. In the proposed sub-project, it shall be mandatory for the contractor to ensure proper disposal of the construction waste at the disposal site as designated by the PWD.

56. **Quarry and Borrow pits operations.** Since the civil works are of a small size, all construction material will be procured from market. There will not be any need for direct procurement of stones and building material from quarries.

57. **Increase in noise levels.** Noise levels in the immediate proximity of sub- project site are expected to increase somewhat during construction. However, these will be largely imperceptible as civil works will be confined to relatively small area. The duration of construction will also be relatively brief. Transportation of construction materials will be confined to day-time, depending upon extent of construction activity. The increase in noise levels is expected to be marginal (say 2-5 dB(A)). This increase will be felt up to a distance of 200-300 m only. This noise will be intermittent in nature, and will last only during the construction phase. The construction noise will be felt by the nearby office buildings and houses located close to the site. It may be mentioned that these intermittent nature construction noise levels are not anticipated to exceed the stipulated limits of Residential areas. But necessary monitoring of noise levels will be taken up as part of environmental monitoring plan.

58. **Impacts on biodiversity during construction phase.** No major impacts are expected on the biodiversity during the construction phase as the site of subproject is open and there is need to cut 6 trees only. There are no endangered or rare species of flora and fauna at the MCC site.

59. **Disturbance to traffic during construction phase.** At the time of construction, there will be some temporary inconvenience due to transportation of building material and clearance of debris by trucks. However, since the scale of civil works is relatively small, the inconvenience caused will be relatively minor and limited only to the construction phase. A sample Traffic Management plan is attached in **Annexure- 3**.

60. **Impact on cultural properties.** The proposed sub-project will not have any impact on any religious structure or any other structure of historical and/or cultural significance.

61. **Ground Water.** Ground water will not be extracted and used for construction purposes. The contractor will arrange for water from the market. It will be supplied by water tankers. The problem of ground water contamination is also not anticipated during the construction phase since there will be proper disposal of the waste water.

62. **Ambient Air Quality.** Generation of dust is anticipated during transportation, excavation, and construction activities. Some dust and gaseous emissions will also be generated during the construction period from machines such as mixers, and vehicles engaged in transportation of construction materials. Pollutants of primary concern at this stage include respirable and suspended Particulate Matter (RSPM) and gaseous emissions (NO_x, SO₂, CO, etc.). However, transportation of construction materials will be confined to a few trips per day depending upon extent of construction activity. Therefore, impact at this stage will be temporary and restricted to the close vicinity of the construction sites only.

63. All vehicles and construction equipment operating for the contractor(s) and the consultant will obtain and maintain "Pollution under Control" (PUC) certificates. To control dust emissions, vehicles deployed for borrow materials, sand and aggregate haulage, will be covered with tarpaulins to be prevent spillage. Regular sprinkling of water during excavations, loading, unloading, vehicular movement, and raw material transport will prevent spread of dust and other contaminants. Periodic air quality monitoring will be conducted to ensure that emissions to comply with the vehicle emission standards specified by the Government of India and ambient air quality standards specified by the Central Pollution Control Board. The contractors will submit emission monitoring results as a compliance with environmental monitoring plan.

64. **Construction Waste.** Some waste will be generated due to excavated earth material and waste from construction. Debris and excavated earth material can be reused subject to the approval of the PWD Engineer during the construction. Waste generated during construction and demolition will be disposed off as per law and to the satisfaction of the Engineer. The clean-up and restoration operations will be implemented by the contractor prior to demobilization. The contractor will clear all temporary structures and dispose off all garbage from construction site. All construction zones used and affected by the sub-project will be left clean and tidy, at the contractors' expense as per the satisfaction the PWD.

65. The contractor is likely to engage local labor for various construction activities. However, in case of migrant labor has to be engaged, the contractor will establish properly designed labor camps with all basic amenities such as potable drinking water supply and sanitation facilities (septic tanks and soak pit). Dust bins will be placed in adequate numbers. The EMP lays down some measures to address likely adverse impacts associated with the labor camp. Since MCC site is inside Nahan city, the contractor in all probability will hire house for the accommodation of construction work force.

66. **Emergency Plan for Accident and Natural Hazards-** The contractor with the help of PWD and PMC will prepare an onsite emergency plan for possible accidental scenarios due to construction activities and material handling and transport. For any natural hazards emergency management plan prepared by PWD as part of Disaster Management Plan will be followed because site will be in possession of PWD till completion of construction works.

E. Environmental Impacts during Operation Phase

67. Since only facilitation of interviews, counseling of job seekers and record keeping of registering candidates will be undertaken at the proposed MCC, there will not be any adverse environmental impact during operation. The MCC design provides for adequate parking, accommodation, and safe disposal for waste water and solid waste. Toilet blocks with septic tank and soak pits have been included in the MCC design. The solid waste generated at MCC during operation phase will be segregated. Its disposal will be integrated with Nahan city waste disposal system. There may also be some waste on account of operation and maintenance of solar PV cell. The supplier of PV cell will be responsible for collection of waste for possible recycle and reuse.

68. Given the relatively small size of MCC building, there will not be any significant vehicular increase on account of their operations at their respective locations. Most candidates coming for registration, interviews and counseling at MCC will be using public transport and will be locals. A diesel generator set will be required, but only during power cuts. The generator will be of the silent type, and will comply with the levels stipulated by Central Pollution Control Board.

69. **Safety Measures.** The design of the MCC includes structural and seismic safety measures required by India's latest building codes (in seismic zone V). The other safety features are explained below:

- The MCC will be equipped with fire-fighting system with portable fire extinguishers and smoke detectors. The staircase will have adequate width to allow for people to exit the MCC building during any fire-related or other eventuality.
- During natural calamities, the operations will be stopped. The trainees and staff will be safely evicted as per Disaster Management plan of Himachal Pradesh.
- Necessary first aid facilities will be provided at the MCC building.

70. **Socioeconomic Impacts.** The MCC building will have a positive development impact since it will provide market-relevant vocational training to the needy urban youth, and help them in improving their livelihoods and / or getting formal jobs.

71. **Flora and Fauna.** Since the MCC will be located within the built-up area of Nahan city so no adverse impact on fauna and flora is anticipated due to operations. Further, to enhance the natural look of the MCC building and premises, plantation of shrubs and landscaping will be taken up along the pathways and vacant space.

72. **Emergency Plan for Accident and Natural Hazards-** For operation phase onsite emergency plan will be prepared by the MCC Manager for minor accidents and fire. For natural calamities the Disaster Management Plan prepared by DOLE will be followed. The Disaster Management Plans have been prepared by the respective departments of GoHP as per provisions of Disaster Management Act 2005 of Government of India.

F. Description of Planned Mitigation Measures

73. Screening of environmental impacts is based on the magnitude and duration of the impact. **Table-9** provides the potential environmental impacts and the mitigation measures including the institutional responsibilities for implementing the same. The sub-project site is located sufficiently away from protected areas and the components proposed will not impact any environmentally sensitive or protected areas. All sub-project activities including construction and operation will take place within available DOLE land.

Table-9: Summary of Environmental Impacts and Planned Mitigation Measures

Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
1	Location Impacts				
1.1	Lack of sufficient planning to assure long term sustainability of the MCC building and ensure protection specially from earthquake and other natural disasters	Permanent	Major	<p>The design MCC building has been completed considering earthquake coefficient of zone V.</p> <p>The MCC site is not on any Bank of River and away from Core and Buffer zones of protected areas. The site is also not located in any reserved, protected or revenue forest.</p>	PMU and PWD
2	Design and Pre-construction Impacts				
2.1	Consents, permits, clearances, no objection certificates (NOC), etc.	Permanent	Major	<p>Obtain all necessary consents, permits, clearance, NOCs, etc. prior to start of civil works.</p> <p>Acknowledge in writing and provide report on compliance with all the obtained consents, permits, clearance, NOCs, etc.</p> <p>Include in detailed design drawings and documents all conditions and provisions if necessary.</p> <p>In the subproject, there is requirement to cut 6 trees. The permission to cut these trees should be obtained from Municipal Council.</p>	PIU and PWD
2.2	Layout of components to avoid impact on the aesthetics of the site.	Permanent	Major	<p>The sub-project components will not have any adverse impacts on aesthetics of sites as these involve construction of MCC building at a vacant plot owned by DOLE at Nahan. Hence, no mitigation measures are warranted.</p>	Not Applicable
2.3	Slope stability related issues	Permanent	Minor	<p>The MCC site at Nahan is on an undulating terrain. During the building design, necessary slope protection measures have been adopted as part of building design.</p>	Not applicable

Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
					PMU and PWD
2.4	Increased storm water runoff from alterations of the site's natural drainage patterns due to landscaping, excavation works, construction of parking lots, and addition of paved surface.	Permanent	Moderate	Design of proposed MCC will allow efficient drainage and maintain natural drainage pattern. The drainage will not be an issue as site is on undulating terrain.	PMU and PWD
2.5	Integration of energy efficiency and energy conservation programs in design MCC	Permanent	Moderate	Following measures have been included in the design to enhance energy efficiency: <ul style="list-style-type: none"> • Usage of recyclable materials like wood substitutes. • Installation of BEE certified equipment • Usage of energy efficient lighting fixtures (LED and solar). • Provision of Solar power generation 	PMU and PWD
3	Construction Impacts				
3.1	Construction Camps - Location, Selection, Design and Layouts	Temporary	Moderate	Construction camp at the MCC site will be located within the sites as far as possible. The construction camp will not affect the day-to-day activities of local residents. Adequate sanitation facilities shall be provided at camp site and no waste water will be discharged outside. It is suggested a house is taken on rent for accommodation of construction workers as site is in habitation area.	Contractor and PIU
3.2	Traffic circulation plan during construction	Temporary	Moderate	Prior to commencement of site activities and mobilization on ground, the contractor will prepare a traffic circulation plan for safe passage of local traffic during construction Phase . This will include alternative access routes, traffic regulations, Signages, etc. The contractor will get these plans approved from the PWD (the Engineer),	Contractor and PWD

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Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				The contractor will disseminate the traffic circulation plan around the sub- project site.	
3.3	Impacts on flora and fauna	Temporary	Moderate	<p>Conduct site induction and environmental awareness programs at the MCC construction site.</p> <p>Limit activities within the work areas.</p> <p>Storage of construction materials within the sub-project site limits.</p> <p>Prepare site landscape and shrubs and tree plantation plans at the end of construction period and necessary landscape, tree plantation and shrubs plantation should be carried out. About 20 trees need to be planted to compensate 6 trees to be cut.</p>	Contractor and PWD
3.4	Site clearance activities, including delineation of construction areas	Temporary	Moderate	<p>The commencement of site clearance activities will be undertaken with due permission from the Environment Specialist of the PWD/HPKVN to minimize environmental impacts.</p> <p>All areas used for temporary construction operations will be subject to complete restoration to their former conditions with appropriate rehabilitation procedures.</p>	Contractor and PWD
3.5	Drinking water availability	Temporary	Major	Sufficient supply of potable water will be provided and maintained at the construction site. If the drinking water is obtained from an intermittent public water supply, then storage tanks will be provided.	Contractor and PWD
3.6	Waste disposal	Permanent	Major	Location of disposal site for construction waste will be finalized by the Environmental Specialist of the PWD and HPKVN. He will confirm that disposal of the material will not impact the water body or environmentally	Contractor and PWD

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Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				sensitive areas. He will also ensure that no endangered or rare flora is impacted by such materials.	
3.7	Stockpiling of construction materials	Temporary	Moderate	Stockpiling of construction materials should not impact or obstruct the local drainage and Stockpiles will be covered to protect from dust and erosion.	Contractor and PWD
3.8	Soil Erosion	Temporary	Moderate	Necessary slope protection measures at the MCC site should be provided as per drawings. Adequate measures will be taken up at this site so that there is no soil erosion causing risks in the vicinity. The slopes at excavated areas will also be protected.	Contractor and PWD
3.9	Soil and Water Pollution due to fuel and lubricants, construction waste	Temporary	Moderate	The fuel storage and vehicle cleaning area at sub-project site will be stationed such that water discharge does not drain into the local drain. Soil and water pollution parameters will be monitored as per monitoring plan.	Contractor and PWD
3.10	Siltation of water bodies due to spillage of construction wastes	Temporary	Moderate	No disposal of construction wastes will be carried out into any streams drain or river. Extraneous construction wastes will be transported to the pre-identified disposal sites for safe disposal.	Contractor and PWD
3.11	Generation of dust	Temporary	Moderate	The contractor will take every precaution to reduce the levels of dust at construction sites of sub-project. The site will be properly barricaded with prefabricated MS sheets as there are offices and residential houses in surroundings.	Contractor and PWD
3.12	Emission from Construction Vehicles, Equipment and Machinery	Temporary	Moderate	Vehicles, equipment and machinery used for construction will conform to the relevant Standard (vehicular emission standards and CPCB specified standards for equipment and machinery) and will be regularly maintained to ensure that pollution emission levels	Contractor and PWD

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Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				comply with the relevant requirements.	
3.13	Noise Pollution	Temporary	Moderate	Noise limits for construction equipment used in this project will not exceed 75 dB (A). The MCC site will be properly barricaded with prefabricated MS sheets to avoid noise impact in the surroundings.	Contractor and PWD
3.14	Material Handling at Site	Temporary	Moderate	Workers employed on mixing cement, lime mortars, concrete, etc., will be provided with protective footwear and protective goggles. Workers, who are engaged in welding works, will be provided with welder's protective eye-shields. Workers engaged in stone breaking activities will be provided with protective goggles and clothing. The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The PWD will be given at least 6 working days' notice of the proposed use of any chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the Contractor.	Contractor and PWD
3.15	Disposal of Construction Waste	Temporary	Moderate	Safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed off around the sub-project site and especially in vacant land in the locality.	Contractor and PWD
3.16	Safety Measures During Construction	Temporary	Moderate	Adequate safety measures for workers during handling of materials at the sub-project site will be taken up. The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of	Contractor and PWD

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Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
				the workers from fire, accidental injury, etc. First aid treatment will be made available for all injuries likely to be sustained during the course of work. The Contractor will conform to all anti-malaria instructions given to him by the PWD.	
3.17	Onsite emergency plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities	Temporary	Major in case of natural calamity and minor in case of accidents or mishaps at construction site	The onsite emergency plan will be prepared by the contractor in consultation with PWD and PMC. For natural calamities, disaster management plan prepared by the PWD under the provisions of Disaster Management Act 2005 will be followed.	Contractor
3.18	Clearing of Construction of Camps and Restoration	Temporary	Major	Contractor at the sub-project site will prepare site restoration plan for approval by the Engineer. The camp site restoration plan is to be implemented by the contractor prior to demobilization. On completion of the works, all temporary structures will be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the Engineer	Contractor and PWD
4	Operation and Maintenance impacts				
4.1	Environmental Conditions	Temporary	Moderate	Air, water, and noise levels will be monitored periodically as per the Environmental Monitoring Plan prepared. Necessary boundary wall and plantation taken up will be maintained.	DOLE
4.2	Safety risks	Temporary	Major	(i) All safety features provided as part of MCC building constructions will be maintained.	DOLE
4.3	Unhygienic conditions due to poor maintenance of	Temporary	Severe	The DOLE will carry out maintenance of the toilets, and carry out the regular collection	DOLE

Sl. No.	Potential Environmental Issues	Duration or Extent	Magnitude	Proposed Mitigation Measures	Institutional Responsibilities
	sanitation facilities and irregular solid waste collection			and disposal of wastes to the local disposal sites. The septic tanks will be emptied regularly.	
4.4	Onsite emergency plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities	Temporary	Major in case of natural calamity and minor in case of accidents or mishaps at construction site	The Managers of MCC Nahan will prepare on site emergency plan for possible minor accidents and mishaps during operation phase. For natural calamities, the disaster management plan prepared by DOLE will be followed	Manger MCC
4.5	Waste from operation and maintenance of Solar PV Cell	Occasionally	Minor	The supplier of Solar PV cell will collect any waste generated on account of operation and maintenance for possible recycle/reuse/disposal as operations will be maintained by the supplier.	Operator Solar PV Cell

G. Land Aquisition and Resettlement

74. The proposed MCC at Nahan is planned on land owned by DOLE. Hence, there will not be any acquisition of private land. Since the site is unencumbered land, therefore, there is no acquisition any private assets also. At the MCC site, there are no squatters or encroachers. Hence, there is no requirement of any rehabilitation and resettlement for constructing the MCC.

V. ENVIRONMENT MANAGEMENT PLAN (EMP)

A. Institutional Arrangements for Project Implementation

75. The Government of Himachal Pradesh through DoP is the executing agency. The executing agency (i) assumes overall responsibility for the execution of the Project and reporting; (ii) engage adequate permanent or fixed-term staff to implement the Project; (iii) setup a state-level project management unit (PMU) and project implementation units (PIUs) at local sub-project level; (iv) provides overall strategic guidance on technical supervision and project execution; and (v) ensures overall compliance with the loan covenants.

76. The implementing agencies in the project are HPKVN, DOTE, DOHE and PWD. The implementing agency responsibilities include (i) project planning and budgeting; (ii) day-to-day assistance, supervision and guidance for the project implementation units and their consultants; (iii) review sub-projects for due diligence requirements and approve sub-project proposals; (iv) bidding, evaluation and contract award; (v) managing and disbursing funds; (vi) review compliance with loan covenants, contract specifications, work plans and quality control; and (vii) consolidate and submit progress reports, finance and accounting / audit reports, and matters requiring higher level decision to state-level empowered committee (SLEC) and ADB.

77. A State-level empowered committee (SLEC) has been established in Himachal Pradesh, chaired by State's Chief Secretary, with Principal Secretary/Secretary of the Department of Planning as Member Secretary and comprised of Secretaries from relevant line departments (PWD, DoUD, DoRD and DoLE) and Managing Director -HPKVN. The SLEC has been empowered to take all decisions on behalf of the State and will (i) act as a policy making body, (ii) provide overall advice and guidance to the State's executing agency and PMU, and (iii) accord all approvals under the Project.

78. DoP will establish a PMU, headed by a full-time Project Director (PD) at HPKVN, and consisting of personnel drawn from relevant line departments and market. This PMU will also have safeguards expert (social and environment). The PMU will be supported by the Project Management Consultants (PMC). The PMU will be the nodal agency for overall management of all program activities and will be responsible for: (i) project planning and budgeting; (ii) providing day-to-day assistance, supervision and guidance for the PIUs and PWD; (iii) reviewing sub-projects to satisfy ADB's due diligence requirements and approving sub-project proposals submitted by PIUs and line departments; (iv) bidding, evaluation and contract award; (v) managing and disbursing funds; (vi) reviewing compliance with loan covenants, contract specifications, work plans and quality control; (vii) consolidating and submitting progress reports, finance and accounting/audit reports, and matters requiring higher-level decision, to the SLEC and ADB.

79. The sub-projects will be implemented by the Project Implementation Units (PIUs) at local level, comprising of personnel drawn from relevant line departments on deputation and outside of government and will be headed by a Project Manager. The PIUs will be responsible for: (i) prioritizing and preparing sub-project proposals; (ii) providing day-to-day assistance, supervision and guidance to the PWD and an agency to be hired for quality check; (iii) conducting detailed assessments and surveys including public consultation and input from stakeholders; (iv) preparing detailed designs, specifications, schedule of quantity, bidding documents, and related documentation; (v) implementing civil works and related activities; (vi) reporting to PMU; (vii) preparing regular progress reports for the SLEC, the executing agency and ADB through PMU; and (viii) supervising construction, conducting quality control, approving progress payments to contractors; and (ix) maintaining records and accounts on an up-to-date basis and making these available to ADB, its missions, or auditors for inspection.

80. The Project Management Consultant (PMC) is proposed to be engaged to provide support to the PMU in overall planning, risk management, implementation, monitoring and evaluation of projects under the HPSPDP. The PMC will also assist the PMU and PIUs in meeting the relevant requirements of ADB, Government of Himachal Pradesh, and Government of India for project implementation. The PMC will report to and work under the overall guidance of the PMU. The scope of services of the PMC's will include but not necessarily be limited to: (i) planning, reporting, and communication; (ii) establishment of procedures and systems; (iii) review and preparation of plans, manuals and reports; (iv) overall project management, monitoring and implementation of MIS; and (v) social, environmental, archaeological, occupational health and safety, community participation and gender action compliance monitoring.

81. The executing agency will engage one agency for the quality check and to meet timeline requirements. This agency will work under the PMU. The scope of services of the agency will include but not necessarily be limited to: (i) surveys, verification of feasibility studies and base maps; (ii) project planning and management support to the PIU; (iii) finalization of design criteria, preparation of manuals, guidelines and systems; (iv) preparation of detailed design and bid documents; and (v) construction management and contract administration.

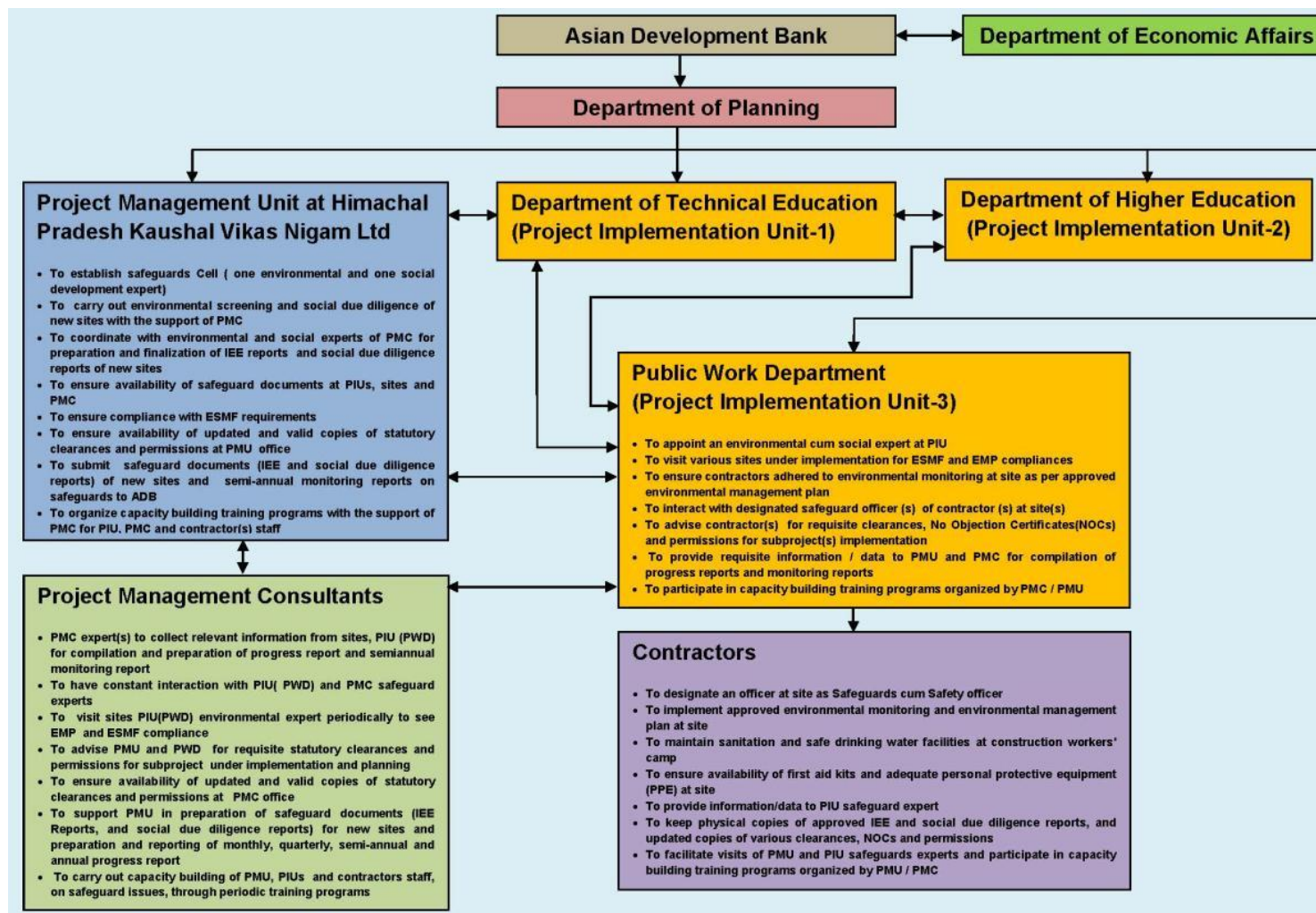
82. In order to ensure effective implementation of safeguard related components in the project, PIU at PWD will include a safeguard expert (an environmental cum social expert) in the team. This safeguard expert will ensure compliance with IEE requirements, and implementation of environmental management plan of sub-project at site through contractor.

83. The PMC will also have safeguard expert in their team to support PMU in reporting, safeguards related documents preparation, disclosure and capacity building of PIUs, PMU and contractor(s). The PMU at HPKVN will establish a safeguard cell comprising of an environmental expert, and a social development expert.

84. The contractor(s) at sub-project site(s) will designate one officer as safeguard cum safety officer for the implementation of ESMF and EMP requirements at sites. The project implementation arrangement for safeguard compliance has been shown below in **Figure - 11**.

85. The EMP for the subproject for the project lifecycle (pre construction, construction, and operation phases) has been given in **Tables-10 to 12**.

Figure-11: Project implementation arrangement for safeguard compliance



B. Responsibility for updating IEE during Pre-Construction and Construction

86. **Responsibility for monitoring.** During construction, the Environmental Specialist of the Safeguards cell at HPKVN and the designated representative engineer of the PWD will monitor the contractor's performance. During the operation phase, monitoring will be the responsibility of the PMU. The Environmental specialist will prepare semi-annual reports.

87. **Responsibility for Reporting.** HPKVN will submit semi-annual reports on the implementation of the EMP to ADB. It will permit ADB to field environmental review missions to examine in detail, the environmental aspects of the project. Any major lapses in adhering to the ESMF and IEE and / or EMPs for specific sub-projects should be reported to ADB immediately. The PMC's Environment Safeguard Specialist will assist the PMU in finalizing the semi-annual and annual progress reports. For any non-compliance observed, corrective actions will be taken in a time bound manner. The cost for mitigating non-compliance will be borne by the contractor as per contract provisions. In case of mitigation costs not coming in scope of contract, these will be met out of contingencies built in EMP cost and in overall project cost.

Table-10: Pre-Construction Phase Environmental Management Plan for MCC Nahan

Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
1	Lack of sufficient planning to assure long term sustainability of the improvements and ensure protection of the assets created.	1-Design for MCC Nahan has included provisions for ensuring effective maintenance and protection of the assets to be created so as to ensure the long term sustainability. The long term sustainability has been ensured by taking into consideration appropriate Bureau of Indian Standards Codes (BIS) for design, Seismic Zone V coefficient, appropriate wind load factor (corresponding to 39 m/s wind speed), and detailed design after carrying geotechnical investigations and topographic survey. 2-The MCC site is not on any Bank of River and away from Core and Buffer zones of protected areas. The site is also not located in any reserved, protected or revenue forest.	Verification of design parameters	PWD	PMU and PMC	Review after completion of DPR	Part of PWD and PMC Professional Fee
2	Layout of components to avoid impacts on the	Locating the MCC in habitation area where some Government offices are	MCC Nahan building's exteriors	PIU and PWD	PMU and PMC	Review after completion of detailed design	Part of PWD and PMC Professional

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
	aesthetics of the MCC site and surroundings	already functioning will avoid impacts on the aesthetics and surroundings as MCC building will very well mix with local buildings. The exterior design of MCC will take care of this issue.					Fee
3	Slope stability related issues	The MCC site is on undulating terrain. Necessary slope protection measures have been considered in the design. These mitigation measures will be implemented in the project. Further, during construction any exposed slopes at excavated areas will be covered and slope protection measures will be provided specially at side slopes of internal roads.	Slope protection measures in building and on side slopes of access path, internal roads, etc.	PIU and PWD	PMU and PMC	Review of recommended slope protection measures	Part of PWD and PMC Professional Fee
4	Increased storm water runoff from alterations of the site's natural drainage patterns due to landscaping, excavation works, construction of parking lot, and addition of paved surfaces	Design of proposed MCC building enables efficient drainage of the plot and maintains natural drainage patterns. The storm water generated will be diverted to local drains through a properly constructed drainage system. Since MCC site is undulating terrain, therefore, there is swift flow and drainage is not an issue.	Arrangement for proper diversion of storm water runoff	PIU and PWD	PMU and PMC	After mobilization of contractor at the site and during establishment of construction camp at site	Incidental to construction cost

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
5	Integration of energy efficiency and energy conservation programs in design of MCC components	The detailed design for the MCC has ensured that environmental sustainability principles, including energy efficiency, resource recycling, waste minimization, etc are included. The design considers the following energy efficiency measures: <ul style="list-style-type: none"> • Usage of recyclable materials like wood substitutes. • Installation of BEE certified equipment • Usage of energy efficient lighting fixtures (LED) • Provision of P-V cells on roof for solar power. 	Specifications of rain water harvesting structures, electrical fixtures, details of water heating system	PIU and PWD	PMU and PMC	During finalization of detailed design	Part of project cost
6	Consents, permits, clearances, no objection certificate (NOC), etc.	Obtain all necessary consents, permits, clearances, NOCs, etc. prior to start of civil works. Acknowledge in writing and provide report on compliance all obtained consents, permits, clearances, NOCs, etc. Obtain permission from Nahan Municipal Council to cut 6 trees	Consents, permits, clearance and NOCs Records and communications	PIU	PMU	check consent for establishment of construction camp , approval from civic authorities for the proposed MCC, tree cutting permission from Nahan Municipal Council.	Project cost
7	Establishment of	1-Conduct documentation of	Records and	Contractor	PIU and PWD	Once prior to	Contractor

Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
	baseline environmental conditions prior to start of civil works	location of components, areas for construction zone (Camp, staging, storage, stockpiling, etc.) and surroundings (within direct impact zones). Include photos and GPS coordinates 2-Carry out pre construction phase environmental monitoring in respect of ambient air quality, water quality and noise levels as per monitoring plan. This monitoring is to establish baseline environmental monitoring.	Photographs			start of construction works	
8	Utilities	<ul style="list-style-type: none"> The locations and operators of utilities to be impacted should be identified and documented in detailed design documents. This measure is to avoid unnecessary disruption of services during the construction phase. The contractor is to prepare a contingency plan to include actions to be done in case of unintentional interruption of services. 	<p>List and maps showing utilities to be shifted</p> <p>Contingency plan for services disruption</p>	<ul style="list-style-type: none"> PWD will prepare preliminary list and maps of utilities to be shifted During detailed design phase, contractor to (i) prepare list and operators of utilities to be shifted; (ii) contingency plan for any interruption in 	PIU and PWD	Pre-Construction Phase	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		<ul style="list-style-type: none"> Obtain from the PIU and / or PWD the list of affected utilities and operators; If relocations are necessary; contractor will coordinate with the service providers to relocate the utility. 		services			
9	Social and Cultural Resources	<ul style="list-style-type: none"> Consult Archaeological Survey of India (ASI) or Himachal Pradesh State Archaeology Department to obtain an expert assessment of the archaeological potential of MCC site. Consider alternatives, if the sites, are found to be of medium or high risk. Include state and local archaeological, cultural and historical authorities, and interest groups in consultation forums as project stakeholders so that their expertise can be made available. Develop a protocol for use by the contractor in conducting any excavation work, to ensure that any chance finds are recognized and measures 	Chance find protocol	<ul style="list-style-type: none"> PMC to consult ASI or HP State Archaeology Department PMC to develop protocol for chance finds 	PMU	Prior to start of construction activities	PMC

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		are taken to ensure they are protected and conserved.					
10	Construction Camps - Locations, Selection, Design and Layout	<p>Sitting of the construction Camp, at MCC Nahan site, shall be as per the guidelines below and details of layout to be approved by PWD.</p> <p>The potential sites near the MCC site will be selected for labor camp and this site shall be visited by the environmental expert of PMU safeguards cell along with environmental expert of PWD and one having least impacts on environment will be approved by the PWD and PMU. As far as possible, construction camp will be established at vacant land near the MCC site to avoid impact on other land. The contractor will also explore possibility to establish construction camp in some rented house in the vicinity of MCC site.</p> <p>Locations for storage of construction materials shall be identified near the MCC site, alternatively any suitable buildings close to MCC site may also be used</p>	Construction Camp site, and locations of material storage areas, sanitation facilities	Contractor	PWD and PIU	At the time of construction camp establishment and finalization of storage areas	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		for materials storage. Sanitation facilities at construction camp shall be adequately planned if it is established in open..					
11	Sources of construction materials	<p>Use quarry sites and sources licensed by the GOHP.</p> <p>Verify suitability of all material sources and obtain approvals from PIU.</p> <p>If additional quarries are required after construction has started, obtain written approval from PIU. Submit to PWD on a monthly basis documentation of sources of materials.</p>	Permits issued to quarries and sources of materials	<p>Contractor</p> <p>PMC and PWD to verify sources (including permits) if additional is requested by contractor</p>	PMU and PIU	Upon submission by contractor	PMC and PWD as part of consultancy fee
12	Access for Construction material transportation	<p>Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of MCC site.</p> <p>Schedule transport and hauling activities during non-peak hours.</p> <p>Locate entry and exit points in areas where there is low potential for traffic congestion.</p>	Traffic management plan	Contractor	PIU and PWD	During Delivery of construction materials	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		<p>Keep the site free from all unnecessary obstructions.</p> <p>Drive vehicles in a considerate manner. Coordinate with the Traffic Police Department for temporary road diversions and for provision of traffic aids if transportation activities cannot be avoided during peak hours.</p>					
13	Occupational health and safety	<p>Comply with IFC EHS Guidelines on Occupational Health and Safety. Develop comprehensive site-specific health and safety (H&S) plans. The overall objective is to provide guidance to contractor on establishing a management strategy and applying practices that are intended to eliminate, or reduce, fatalities, injuries and illnesses for workers performing activities and tasks associated with the project.</p> <p>Include in H&S plan measures such as: (i) type of hazards at MCC</p>	Health and safety (H&S) plan	Contractor	PMU and PMC, PIU and PWD	During Pre-construction phase	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameters (Indicators for Compliance)	Responsible for Implementation	Responsible for Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		<p>construction site; (ii) corresponding personal protective equipment for each identified hazard; (iii) H&S training for all site personnel; (iv) procedures to be followed for all site activities; and (v) documentation of work-related accidents.</p> <p>Provide medical insurance coverage for workers.</p>					
14	Stakeholder consultations	Continue information dissemination, stakeholder consultations, and involvement/participation of stakeholders during project implementation.	<p>-Disclosure records</p> <p>- Consultations</p>	PMU,PMC PIU,PWD and Contractor	PMU and PMC	<ul style="list-style-type: none"> • During updating of IEE Report • During preparation of site- and activity-specific plans as per EMP • Prior to start of construction • During construction 	PMU and Contractor

Table-11: Construction Phase Environmental Management Plan for MCC Nahan

Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
1	Sanitation and drinking water facilities at construction Camps of sub-projects	The contractor shall provide sanitation facilities at the MCC Nahan construction camp site. These facilities will include dust bins in adequate numbers for solid waste collection, drinking water facilities, and separate toilets for male and females. In case camp is established in some house, then the contractor will ensure that adequate facilities exist in the house. These toilets facilities shall be maintained. In case camp is established in open at site, then septic tanks/soak pits shall be provided at the toilets. The dust bins shall be regularly emptied and waste from camp site shall be disposed off at designated locations.	Construction camp sanitation and drinking water facilities	Contractor	PWD and PIU	Regularly during construction phase	Contractor
2	Traffic Circulation plan during construction phase	Prior to commencement of site activities and mobilization on ground ,the Contractor will prepare and get approved from the Engineer (PWD), circulation plan during construction for safe passage of public	Safe movement of Traffic	Contractor	PWD and PIU	Every day during construction phase	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		vehicles so that locals are not at inconvenience. The contractor with support of the PIU will carry out dissemination of these information and circulation plan at site and at key access roads to the					
3	Site clearance activities, including delineation of construction areas	Only ground cover/shrubs that impinge directly on the permanent works or necessary temporary works shall be removed with prior approval from the Environmental Experts of PWD and PMC. All areas used for temporary construction operations will be subjected to complete restoration to their former conditions with appropriate rehabilitation procedures. The photographic records shall be maintained for the temporary sites used for construction. These will help in proper restoration.	Pre-construction records of site and vegetation in area of construction	Contractor	PWD and PIU	Duration of site preparation	PWD and PIU
4	Drinking water availability at Construction camp and construction sites	Sufficient supply of cold potable water to be provided and maintained. If the drinking water is obtained from an intermittent public water supply then storage tanks will be provided. For	Water supply source and availability of water , permission of local authority if obtained from	Contractor	PWD and PIU	During Construction phase regularly	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		this contractor will submit plans how availability of drinking water shall be assured. In case it is obtained from the natural spring then permission from local authorities shall be obtained.	local spring				
5	Waste disposal	The pre-identified disposal location shall be part of Comprehensive Waste Disposal Plan. Solid Waste Management Plan to be prepared by the Contractor in consultation with local civic authorities. The Environmental Specialist of PWD shall approve the disposal site after conducting a joint inspection on the site with the Contractor. Contractor shall ensure that waste shall not be disposed off near natural streams in the surroundings of site and along the access path.	Waste Disposal sites, waste management plan	Contractor	PWD and PIU	Regularly during construction phase	Contractor
6	Stockpiling of construction materials	Stockpiling of construction materials will be done in such a way that it does not impact and obstructs the drainage. The stockpiles will be covered to protect from dust and erosion.	Stockpiling sites at sub-projects	Contractor	PWD and PIU	Regularly during construction phase	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
7	Arrangement for Construction Water	(i) The Contractor shall provide a list of locations and type of sources from where water for construction shall be acquired. (ii)The contractor shall use ground/surface water as a source of water for the construction with the written consent from the concerned Department. (iii)To avoid disruption/ disturbance to other water users, the Contractor shall arrange water from market or from local municipality and consult PWD before finalizing the source.	Water availability at identified water source locations	Contractor	PWD and PIU	Regularly during construction phase	Contractor
8	Soil Erosion	Slope protection measures will be undertaken as per design to control soil erosion. This is important in present case as site is on undulating terrain. Further, side slopes of access and internal roads shall also be protected.	Locations of slope protection	Contractor	PIU and PWD		Contractor
9	Water Pollution from Construction Wastes	The Contractor shall take all precautionary measures to prevent entering of wastewater into any local stream during construction.	MCC site	Contractor	PIU and PWD	Regularly during construction phase	Contractor
10	Water Pollution from	The Contractor shall ensure	Vehicle parking,	Contractor	PIU and PWD	Regularly	Contractor

Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
	Fuel and Lubricants	that all construction vehicle parking locations, fuel/ lubricants storage sites, vehicle, machinery and equipment maintenance and refueling sites shall be located at least 500 m away from the natural streams. Contractor shall ensure that all vehicle/machinery and equipment operation, maintenance and refueling shall be carried out in such a manner that spillage of fuels and lubricants does not contaminate the ground. Waste water from vehicle parking, fuel storage areas, workshops, wash down and refueling areas shall be treated in an oil interceptor before discharging it on land or into surface water bodies or into other treatment system.	refueling sites, Oil interceptor functioning			during construction phase	
11	Soil Pollution due to fuel and lubricants, construction wastes	The fuel storage and vehicle cleaning area will be stationed such that spillage of fuels and lubricants does not contaminate the ground. Soil and pollution parameters will be monitored as per monitoring plan.	Vehicle maintenance and parking area, soil quality monitoring results	Contractor	PIU and PWD	Regularly during construction phase	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
12	Siltation of water bodies due to spillage of construction wastes	No disposal of construction wastes will be carried out into the surface water bodies. Extraneous construction wastes will be transported to the pre-identified disposal site for safe disposal.	Water bodies specially natural streams near MCC site	Contractor	PIU and PWD	Regularly during construction phase	Contractor
13	Generation of dust	The contractor will take every precaution to reduce the levels of dust at construction site. All filling works to be protected/ covered in a manner to minimize dust generation. Since the proposed MCC site is surrounded by habitation, so it shall be properly barricaded with MS sheet of 3-4 m height.	MCC site, air quality monitoring results	Contractor	PIU and PWD	Regularly during construction phase	Contractor
14	Emission from Construction Vehicles, Equipment and Machinery	All vehicles, equipment and machinery used for construction shall conform to the relevant Bureau of India Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 shall be strictly adhered to. The silent/quiet equipment available in the market shall be used as far	PUC certificates of vehicles and machinery	Contractor	PIU and PWD	Regularly during construction phase	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		as possible in the MCC construction works. The Contractor shall maintain a record of PUC for all vehicles and machinery used during the contract period which shall be produced for verification whenever required.					
15	Noise Pollution	The Contractor shall confirm that all Construction equipment used in construction shall strictly conform to the MoEFCC and CPCB noise standards and all vehicles and equipment used in construction shall be fitted with exhaust silencers. At the construction sites noisy construction work such as crushing, operation of DG sets, use of high noise generation equipment shall be stopped during the night time between 10.00 pm to 6.00 am. Noise limits for construction equipment used in this project will not exceed 75 dB (A). In order to minimize impacts on surrounding houses and buildings, MCC site will be properly barricaded with prefabricated	Certificates of vehicles conforming noise standards, noise monitoring results	Contractor	PWD and PIU	Regularly during construction phase	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		MS sheets of adequate height (3-4 m).					
16	Impacts on flora and fauna	Minimize impacts on flora and fauna during construction phase by limiting site clearance bare minimum and limiting all types of pollution generation. At the end of construction period, plant at least 20 trees to compensate six trees to be cut. The plantation may be taken up in vacant space. The shrubs may be planted as per landscaping plan.	Environmental monitoring reports, Trees and shrubs planted at MCC site	Contractor	PWD and PIU	Regularly during construction phase	Contractor
17	Material Handling at MCC Nahan site	Workers employed on mixing cement, lime mortars, concrete, etc., will be provided with protective footwear and protective goggles. Workers, who are engaged in welding works, will be provided with welder's protective eye-shields. The use of any toxic chemical will be strictly in accordance with the manufacturer's instructions. The PWD will be given at least 6 working days' notice of the proposed use of any	Data on available personal protective equipment	Contractor	PWD and PIU	Regularly during construction phase	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		chemical. A register of all toxic chemicals delivered to the site will be kept and maintained up to date by the Contractor.					
18	Disposal of Construction Waste, Debris and surplus cut	The Contractor shall confirm that safe disposal of the construction waste will be ensured in the pre-identified disposal locations. In no case, any construction waste will be disposed off around the MCC site indiscriminately.	Disposal sites	Contractor	PIU and PWD	Regularly during construction phase	Contractor
19	Safety Measures During Construction	Adequate safety measures for workers during handling of materials at sub-project sites will be taken up. The contractor has to comply with all regulations for the safety of workers. Precaution will be taken to prevent danger of the workers from accidental injuries, fire, etc. First aid treatment will be made available for all injuries likely to be sustained during the course of work. The contractor will conform to all anti-malaria instructions given to him by the Engineer.	Records of availability of personal protective equipment, availability of first aid kits	Contractor	PIU and PWD	Regularly during construction phase	Contractor
19	Onsite emergency	The onsite emergency plan	Onsite	Contractor	PWD	Mock Drill	Contractor

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
	plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities	will be prepared by the contractor in consultation with PWD and PMC. For natural calamities, disaster management plan prepared by the PWD under the provisions of Disaster Management Act 2005 will be followed.	emergency plan document and Disaster Management Plan document of PWD			every quarter	
20	Clearing of Construction of Camp and Restoration	Contractor to prepare site restoration plans for approval by the Engineer (PWD). The plan is to be implemented by the contractor prior to demobilization. On completion of the works, all temporary structures will be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the PWD	Restoration plan, and records of pre-construction of temporary sites	Contractor	PIU and PWD	End of construction phase	Contractor

Table-12: Operation Phase Environmental Management Plan for MCC Nahan

Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
1	Environmental Conditions	The periodic monitoring of the ambient air quality, noise level, ground water quality at MCC Nahan as suggested in the monitoring plan through an approved monitoring agency. Compensatory plantation and landscaped areas shall be maintained.	Monitoring results and relevant standards	DOLE through Pollution Monitoring Agency	PIU	As per monitoring Plan	DOLE and PMU
2	Unhygienic condition due to poor maintenance of sanitation facilities and irregular solid waste collection	The DOLE while operating MCC Nahan will carry out maintenance of the toilets and carry out the regular collection and disposal of wastes to a designated waste treatment sites. The solid waste disposal will be integrated with Nahan city waste disposal. Septic tanks will be regularly emptied.	Maintenance schedule of MCC building and facilities created	DOLE	PIU	Every Quarter	DOLE and PMU
3	Natural Disasters	Necessary procedures to be followed by the MCC staff and visiting industry officials for conducting interviews and counseling and job seekers during the natural disasters shall be written at prominent locations.	Warnings of disasters by Meteorological Department	District Administration	PIU	During Disasters	Government of Himachal Pradesh
4	Waste from operation and maintenance of solar PV Cell	The supplier of Solar PV cell will collect any waste generated on account of operation and maintenance for possible recycle/reuse/disposal as	Waste generated from operation and maintenance of Solar PV Cell	Supplier and Operator of Solar PV Cell	MCC Nahan Manager	As per schedule of maintenance	Fee of Solar PV Cell Supplier

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Sl. No.	Environmental Issues	Mitigation Measures	Parameter (Indicators for Compliance)	Responsible Implementation	Responsible Supervision	Frequency for Monitoring	Sources of Fund for Implementing Mitigation Measure
		operations will be maintained by the supplier.					
5	Onsite emergency plan for minor accidents and mishaps and Disaster Management Plan for Natural Calamities	The Manager of MCC Nahan will prepare on site emergency plan for possible minor accidents and mishaps for operational phase. For natural calamities, the disaster management plan prepared by DOLE will be followed.	Onsite Emergency plan document and Disaster Management Plan document	Manager MCC	DOUD	Mock Drills every quarter	MCC operation cost

C. Environmental Monitoring Plan

88. Environmental monitoring (covers EMP implementation and compliance with all of the Government of Himachal Pradesh's rules with respect to the environment, and handling of solid and liquid waste) at site will be undertaken by the contractor during pre-construction and construction Phases, and will be supervised by PWD. Environmental monitoring during operation phase will be undertaken by the DOLE and be monitored by HPKVN. The Environment and Social Safeguards Specialists of the PMC will ensure that EMP and environmental monitoring plan are implemented.

89. To ensure the effective implementation of mitigation measures and EMP during construction and operation phase of MCC, it is essential that an effective Environmental Monitoring Plan be followed as given in **Table 13**. In this monitoring plan, proposed monitoring of all relevant environmental parameters, with a description of the sampling stations, frequency of monitoring, applicable standards and responsible agencies are also presented.

Table-13: Environmental Monitoring Plan for MCC Nahan for Preconstruction, Construction and Operation Phases

Sl. No.	Field (Environmental Attribute)	Phase	Parameters to be Monitored	Locations	Frequency	Responsibility	Cost (INR/US\$)
1	Air Quality	During pre-construction phase	CO, NOx, PM ₁₀ , PM _{2.5} , and SO ₂	MCC construction site at Nahan	Once in the pre-construction phase to establish baseline	Contractor, PWD, PMU, and DOLE through approved Monitoring Agency	INR130,000/ US \$ 2000
		During Construction Phase			Once in a season (except monsoon season) during construction phase (24 months construction phase)		
		Operation Phase			Once in a season except monsoon season for first 2 years of operation phase		
2	Water quality	During pre-construction phase	TDS, TSS, pH, Hardness, BOD, Faecal Coli form	Ground water close to MCC construction site	Once in pre-construction phase to establish baseline	Contractor, PWD, PMU, and DOLE through approved Monitoring Agency	INR130,000/ US \$2000
		During Construction Phase			Once in a season (except monsoon season) during construction phase		
		Operation Phase			Once in a season except monsoon season for first 2 years of operation phase		
3	Noise Levels	During pre-construction phase	Noise quality as per National Ambient Noise Standards on dB(A) scale	Noise levels at MCC construction sites	Once in pre-Construction phase to establish baseline	Contractor, PWD, PMU, and DOLE through approved Monitoring Agency	INR 39,000/ US \$ 600
		During Construction Phase			Once in a season (except monsoon season) during construction phase		
		Operation Phase			Once in season except monsoon season for first 2 years of operation phase		

Summary of Site- and Activity-Specific Plans as per EMP

90. **Table-14** summarizes site- and activity-specific plans to be prepared as per EMP tables.

Table-14: Site- and Activity-Specific Plans/Programs as per EMP

To be Prepared During	Specific Plan/Program	Purpose	Responsible for Preparation	Responsible for Implementation
Pre-Construction phase	Environmental monitoring program as per detailed design	Indicate sampling location, methodology and parameters	PMU, PIU, PMC and PWD	Contractor
Pre-Construction phase	List and maps showing utilities to be shifted	Utilities shifting	PWD during preliminary design and pre construction phase	Contractor
Pre-Construction Phase	Contingency plan	Mitigate impacts due to interruption of services during utilities shifting	Contractor	Contractor
Pre-Construction	Chance find protocol	Address archaeological or historical finds	PMU and PMC	Contractor
Pre-Construction Phase	List of pre-approved sites for construction camp, stockpiles, and waste disposal sites	Location/s for construction camp, areas for stockpile, storage and disposal for minimization of impacts	PMC, PMU, PWD and PIU	Contractor
Pre-Construction phase	Waste/Spoil management plan	Mitigate impacts due to waste generation	Contractor	Contractor
Pre-Construction phase	Spill prevention and containment plan	Mitigate impacts of accidental spills of oil, lubricants, fuels, concrete, and other hazardous materials	Contractor	Contractor
Construction phase	Traffic management plan	Mitigate impacts due to transport of materials and project related traffic movement	Contractor	Contractor
Construction phase	Health and Safety (H&S) plan	To comply with IFC EHS Guidelines on Occupational health and safety	Contractor	Contractor
Construction phase	Erosion control and re-vegetation plan	Mitigate impacts due to erosion and vegetation removal at sub-project sites	Contractor	Contractor
Construction Phase	Environmental Monitoring Plan Implementation	To check efficacy of mitigation measures	PMC, PMU, and PWD	Contractor
Operation Phase	Maintenance of sub- project site landscape, and plantation and	To maintain MCC plantation and to carry out environmental monitoring to check	PMU, and DOLE	DOLE

To be Prepared During	Specific Plan/Program	Purpose	Responsible for Preparation	Responsible for Implementation
	environmental monitoring plan	environmental conditions at site		

91. The guidelines for preparation of site specific traffic management plans have been provided in **Annexure-3**.

D. Capacity Building

92. In addition to the primary objective of skills enhancement of Himachali youth, the CLC, MCCs and RLCs sub-projects will also raise awareness about environmental conservation amongst trainees, implementing agencies, and local communities. The project will have the opportunity to build capacity in environment protection for the above mentioned stakeholders.

93. The Environmental Specialists at PMC and safeguards cell at PMU will provide the basic training required for environmental awareness. Specific modules customized for the available skill set will be devised after assessing the capabilities of the members of the Training Program and the requirements of the project. The training would cover basic principles of environmental assessment and management; mitigation plans and programs, implementation techniques, monitoring methods and tools. The proposed training program along with the frequency of sessions is presented in **Table 15** below.

Table-15: Training Modules for Environmental Management

Program	Description	Participants	Duration	Training Conducting Agency
A. Pre-Construction Phase				
Sensitization Workshop on Environment	Introduction to Environment: environmental assessment and social due diligence requirements in the project, Regulatory Clearances, and permission requirements in the project, and EMP Implementation, Introduction of ADB SPS 2009, and ADB Guidelines on Environmental considerations in planning, design and implementing projects	DOLE officials, Environmental specialist of PWD and other Engineering staff associated with the MCC, PIU staff and HPKVN PMU staff	½ Working Day	Environmental Specialist of the PMC
Session 1	Environmental impacts due to sub-projects in construction and operation phases, pollution generation activities during pre-construction and construction phases Environmental Management, Environmental Mitigation Provisions in the Contract, Implementation Arrangements, Methodology of Assessment Good engineering practices to be integrated into contract documents	All PIU staff, HPKVN, and PWD Staff associated with subproject	½ Working Day	Safeguards Specialist of the PMC
B. Construction Phase				
Session 2	Roles and Responsibilities-	Engineers and staff	½	Safeguards

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Program	Description	Participants	Duration	Training Conducting Agency
	Roles and Responsibilities of Implementing Agencies officials, associated contractor and consultants towards protection of environment. Implementation. Arrangements for EMP and Environmental Monitoring during construction phase	of line departments of the Government of GOHP, PIUs, PMC, PMU and HPKVN	Working Day	Specialist of the PMU
Session 3	Monitoring and Reporting System	Engineers and staff of implementing agencies , and PMU/PIU (including the ES)	¼ Working Day	Safeguards Specialist of PMU

DOLE = Department of Labor and Employment, ES = Environment Specialist, HPKVN= Himachal Pradesh Kaushal Vikas Nigam Limited, PIU = Project Implementation Unit, PMC = Project Management Consultant, PMU = Project Management Unit, PWD = Public Works Department.

E. Environmental Budget

94. Most of the mitigation measures require the contractor to adopt good site practices, which should be part of their normal procedures already, so there are unlikely to be major costs associated with compliance. Only those items not covered under budgets for construction are included in the IEE budget. The IEE costs include mitigation, monitoring and capacity building costs. The summary budget for the environmental management costs for the MCC subproject is presented in **Table 16**.

Table-16: Environmental Management and Monitoring costs (INR)

Monitoring Component	Rate	Amount (INR)	Source of Fund
Pre-Construction and Construction Phase			
Air Quality - one location at MCC construction site, thrice a year (one sample pre construction and 6 samples during construction phase; total 7 samples)	10,000	70,000	Contractor
Water Quality- One ground water sample from MCC construction site thrice a year (one sample pre construction and 6 samples during construction phase; total 7 samples)	10,000	70,000	Contractor
Noise Quality-One location at MCC construction site, thrice a year (one sample pre construction and 6 samples during construction phase; total 7 samples)	3000	21,000	Contractor
Training for Capacity Building of stakeholders	Covered in the consultancy cost of PWD and PMC		
Total Pre-Construction and Construction Phase Monitoring Cost (A)		161,000	Contractor(s)
O & M Phase			
Air Quality – at MCC building, thrice a year for initial 2 years (3 samples per annum, total 6 samples)	10,000	60,000	PMU, and DOLE

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Monitoring Component	Rate	Amount (INR)	Source of Fund
Water Quality -one ground water sample from MCC site, thrice a year for initial 2 years (3 samples per annum, total 6 samples)	10,000	60,000	PMU, and DOLE
Noise Quality- one location at MCC building, thrice a year, for initial 2 years (3 samples per annum, total 6 samples)	3000	18,000	PMU, and DOLE
Total O&M Phase Monitoring Cost (B)		138,000.00	PMU, and DOLE
Total Cost (A+B)		299,000.00	
Contingencies @ 5 %		14,950.00	
Total Budgeted Cost		313,950 (Say 350, 000)	

F. Environmental Monitoring and Reporting

95. The PMU with the assistance of PMC will monitor and measure the progress of EMP implementation during construction phase. During operation phase PMU safeguard cell will take care of EMP implementation. PWD environmental cum social expert will undertake site inspections and document review to verify compliance with the EMP and progress toward the final outcome. PWD will submit monthly monitoring and implementation reports to PMU at HPKVN and to the concerned departments (DORD, DOLE and DOUD), who will take follow-up actions, if necessary. PWD will also submit quarterly, semiannual and annual monitoring and implementation reports to PMU. The PMU will submit semi-annual monitoring reports to ADB. Monitoring reports will be posted in a location accessible to the public.

96. ADB will review project performance against the EA's commitments as agreed in the legal documents. The extent of ADB's monitoring and supervision activities will be commensurate with the Project's risks and impacts. Monitoring and supervising of social and environmental safeguards will be integrated into the project performance management system. ADB will monitor projects on an ongoing basis until a project completion report is issued.

VI. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

A. Process For Consultations Followed

97. This sub-project does not involve any elements, which could have an adverse impact on the community. There is no deprivation of any sort for the residents or displacement of any groups. Particularly, with regard to environmental impacts the sub-project can be characterized as innocuous.

98. In view of this, the need for holding a public hearing(as defined in EIA Notification 2006 of Government of India) is not perceived at this stage. However in compliance with the ADB's guidelines, focused public consultations were undertaken during the site visits in sub-projects areas. Residents of the areas were informed about the proposed sub-project in their area and their views were obtained. During the preparation of this IEE, consultations have been held with the officials of Department of Planning, HPKVN, Forest Department, DOLE, and other stakeholders such as Municipal Council.

99. The process of consultations was taken up, as an integral part of the sub-project design and environmental assessment, in accordance with ADB Guidelines and following objectives:

- To educate the general public, specially potentially impacted or benefited communities, individuals and stakeholders about the proposed sub-project activities;
- To familiarize the people with technical and environmental issues of the sub-project for better understanding;
- To solicit the opinion of the communities and individuals on environmental issues and assess the significance of impacts due to the proposed development;
- To foster co-operation among officers of EA and IAs, the community and the stakeholders to achieve a cordial working relationship for smooth implementation of the sub- project and
- To identify the environmental issues relating to the proposed activity.

100. During the consultations local residents opined that there is need for guiding youth for career related aspects as many a time, they end up selecting unsuitable employment for them. The MCC construction and operations will help to facilitate interviews for skilled youth, guide them on job prospects and recent developments and will also act as an interface between skilled youth and industry. They demanded fast implementation of the sub-project. The dates of consultations and stakeholders consulted have been summarized below in **Table 17**. The views, comments and suggestions of stakeholders and their incorporation in project design are presented in **Tables 18 and 19**. The records of consultations (list of participants with signatures) and consultation photographs are given in **Annexure- 4**.

Table-17: Dates and Stakeholders Consulted

Sl. No.	Stakeholders Consulted	Dates of Consultations
1	Himachal Pradesh Forest department	23 December 2015
2	Department of Rural Development, Department of Labor and Employment and Department of Higher Education	21 December 2015, May 10, 2016
3	Himachal Pradesh Pollution Control Board	23 December 2015
4	State Department of Environment, GOHP, HPKVN and DOP	14 - 18 March 2016

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Sl. No.	Stakeholders Consulted	Dates of Consultations
5	Department of Technical Education, GOHP	12 December 2015 and, 16 and 17 March 2016
6	Local Public at MCC Nahan Site	07 May 2018

101. It is clear that most of the suggestions of stakeholders have been taken care in the project design.

Table-18: Views, Comments, and Suggestions of Stakeholders at sub-Project Sites and Addressed in Project Design

Sl. No.	Place	Date	Consultations held with	Issues discussed	Outcome of discussions and consideration in project design and Implementation
1	MCC Site, Nahan	07/05/2018	With local Public, and DOLE Officials	MCC proposal, project benefits, implementation schedule, environmental and social impacts during project implementation, etc.	<ol style="list-style-type: none"> 1. Participants welcomed the project as they told that there is urgent need of MCC so that skilled youth is properly guided for joining the proper employment. Further, being presence of industrial areas in the district at Kala Amb and Paonta Sahib, MCC officials can interact with the industry for providing local skilled youth registered at MCC. 2. The participating DOLE officials suggested that compensatory plantation may be taken up to compensate cutting of 6 trees. They said that as an user agency, they will obtain permission from Nahan Municipal Council to cut the trees. 3. The participants suggested that MCC should organize career fairs/ job fairs in association with industry. For this proper awareness and publicity campaign should be taken up so that local youth is benefitted. The consultants told the participants that their suggestion is noted and will be considered in operation phase of MCC. 4. The consultant enquired from DOLE officials about MCC site ownership. The officials replied that site ownership is with DOLE. At the time of visit no encroachment was seen, so site has no issues pertaining to rehabilitation and resettlement.

Table-19: Summary of Stake Holder Consultations at Institutional Level

Sl. No.	Place and date	Consultations held with	Issues discussed	Outcome of discussions and consideration in project design and Implementation
1	Shimla, 23/12/2015 and 18/3/2016	Conservator Forest Cum Nodal Officer CAMPA, State Forest Department	Clearances, permissions and No Objection Certificates (NOCs) - requirements from the State Forest Department and suggestions for the project	<ol style="list-style-type: none"> 1. The ADB Environment and Social Safeguards consultant briefly explained the project concept to the state department officials. 2. It was informed by the officials that for any site falling under forest land, clearance is required either under the 'Forest (Conservation) Act, 1980 or under the 'Schedule Tribe and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006. 3. For vocational training purposes, GOHP can give clearance up to 1.0 hectare land. If application is submitted under the Forest (Conservation) Act, 1980, then the net present value (NPV) of the land and cost for

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Sl. No.	Place and date	Consultations held with	Issues discussed	Outcome of discussions and consideration in project design and Implementation
				<p>compensatory forestation are to be paid by the State Government.</p> <p>4. If the application is submitted under Forest Rights Act 2006, then for educational institutes, payment of NPV and compensatory afforestation costs are exempted for the land up to 1.0 hectare. The clearance can also be issued at Divisional Forest Officer level.</p> <p>5. The Forest Officials suggested that application may be made under Forest Rights Act for faster clearance if any site falls under the forest.</p> <p>6. The ADB Environmental consultant assured everyone that sites on forest land will not be considered to the extent feasible. However, under unavoidable situations, applications for clearances will be submitted as suggested.</p> <p>7. The land transfer in DOTE 's name has been completed for Women Polytechnic site at Rehan in Kangra district (This point refers to other sub project of HPSPDP - Women's Polytechnic at Rehan in Kangra district).</p>
2	Shimla, 23/12/2016	Senior Environmental Engineer, Himachal Pradesh Pollution Control Board	Clearances and Permissions required from Himachal Pradesh Pollution Control Board (HPPCB) and Department of Environment	<p>1. The ADB Environmental consultant provided an overview on HPSPDP.</p> <p>2. He enquired about the types of permissions and clearances required from the HPPCB and State Department of Environment.</p> <p>The senior Environmental Engineer, Department of Environment, replied that educational and training institutes are exempted from the environmental clearance process. Therefore, there is no requirement for prior environmental clearances for CLCs, RLCs, MCCs and the Women's Polytechnic planned under HPSPDP. He explained that Consent to establish and Operate has to be obtained from HPPCB only if a residential complex is planned at any of the sites. In case hazardous waste is generated, then a management proposal has to be submitted to the HPPCB for Hazardous waste authorization and disposal.</p> <p>The ADB Environment and Safeguard consultant replied that none of the planned training facilities will generate hazardous waste, either during construction or operation.</p>
3	Sunder Nagar, 22/12/2015, 14/03/2016, and 15/03/2016	Director, DOTE, and other officials	ITI selected for upgradation, locations of RLCs and CLCs selected at ITI campus and site of proposed	<p>5. The ADB Environment and Safeguard consultant enquired whether any of project sites under DOTE are planned in forest areas or within buffer or core zones of national park or bird sanctuary. Director, DOTE, replied that CLC/RLC sites planned are within the vacant sites within the premises of existing industrial training institutes. Only the site for the Women's</p>

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Sl. No.	Place and date	Consultations held with	Issues discussed	Outcome of discussions and consideration in project design and Implementation
			Women Polytechnic at Rehan in Kangra district	<p>Polytechnic in Kangra falls within revenue forest land. For this site NOC from Forest Department has been received ((This point refers to other sub project of HPSPDP - Women's Polytechnic at Rehan in Kangra district).</p> <p>6. The ADB Environment and Safeguard consultant suggested that DOTE should submit land ownership details/revenue records for all sites planned under the ADB funding for due diligence. He noted that DOTE should also start the process of getting NOC from the Forest Department and land transfer in DOTE name for the site in Rehan, Kangra, where the Women's Polytechnic is planned (This point refers to other sub project of HPSPDP - Women's Polytechnic at Rehan in Kangra district).</p>
4	Shimla, 21/12/2015	Department of Labor and Employment (DOLE)	Locations of MCCs planned, approximate area required for MCCs	<p>1. The ADB Environment and Safeguard consultant enquired about the proposed locations of MCCs. The officials replied that with ADB assistance, 11 MCCs planned. The planned locations are Hamirpur, Shimla, Bilaspur, Kullu, Dharmshala, etc. As per Government of India guidelines, the built up area of about 3,000 sq.feet is needed for MCCs.</p> <p>2. The ADB Environment and Safeguard consultant noted that the revenue record of land ownership should be provided to the ADB team for due diligence.</p>
5	Shimla, 21/12/2015	Department of Rural Development (DORD)	Locations of proposed RLCs, environmental and social safeguard issues, tree cutting, etc.	<p>1. The ADB Environment and Safeguard consultant enquired about probable locations of RLCs planned.</p> <p>2. The environmental expert suggested that no sites with temporary or permanent occupation should be identified and revenue records showing ownership details should be provided for the social due diligence. Further, any site involving tree cutting, necessary tree cutting permission should be obtained.</p> <p>3. The environmental expert also suggested that sites should be at least 300 m away from buildings/monuments of heritage importance and those declared as protected monuments by the State Archaeological Department or by the ASI. The officials noted the suggestions.</p>

B. Future Consultation And Information Disclosure

102. To ensure continued public and stakeholder participation in the sub-project life cycle, periodic consultations and focus group discussion should be continued. A grievance redressal committee will be formed within the PIU (at PWD) and also at PMU Level to register grievances of the people regarding technical, social and environmental issues. This participatory process will ensure that all views of the people are adequately reviewed and suitably incorporated in the design and implementation process. Further, to ensure an effective disclosure of the sub-project proposals to the stakeholders and the communities in the vicinity of the individual sub-project location, an extensive project awareness campaign will be carried out.

Information disclosure

103. Electronic version of the IEE will be placed in the official website of the DOLE, HPKVN, GOHP and the website of ADB after approval of the documents by the GOHP and ADB. On demand, any person seeking information can obtain a hard copy of the complete IEE document by paying cost of photocopy from the office of the PMU and PIU, on a written request.

104. The PMU will issue notification on the disclosure mechanism in local newspapers, ahead of the initiation of implementation of the MCC, providing information on the project, as well as the start dates, etc. The notice will be issued by the PMU in local newspapers one month ahead of the implementation works. This will create awareness of the project implementation among the public.

C. Grievance Redress Mechanism

105. The affected person(s)/aggrieved party can give their grievance verbally or in written to the local site office of sub-project. Grievances of affected person will first be brought to the attention of the site in charge, who can resolve the issue at the site level. If the matter is not solved within 7 days period by the site in charge, it will be brought to the Grievance Redress Committee constituted for the purpose in PIU (PWD). This GRC shall discuss the issue in its monthly meeting and resolve the issues within one month of time after receiving the grievance. If the matter is not resolved by GRC at PIU level within stipulated time, it shall be referred to GRC at PMU level by Project Manager of PIU.

106. GRC at PMU shall discuss the issue and try to resolve it and inform the PIU accordingly. If the matter is not resolved by the GRC at PMU level within one month of time. The aggrieved person/party can bring the matter to The Court of Law any time after filing the complaint either at PIU level or PMU level. The PIU and sub-project site office shall keep records of all grievances received including contact details of complainant, date of receiving the complaint, nature of grievance, agreed corrective actions and the date these were affected and final outcome. For this a complaint register will be maintained at each sub-project site. The cost for functioning of Grievance Redress Mechanism will be accounted for in project cost as part of PMU or PIU functioning.

107. Further, person(s) / aggrieved party who are, or may be, adversely affected by the sub-project may submit complaints to ADB's Accountability Mechanism. The accountability mechanism provides an independent forum and process whereby people can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected person(s) / aggrieved party should first make a good faith effort to solve their problems by working with the ADB South Asia operations department including the India Resident Mission.

Composition and functions of GRC

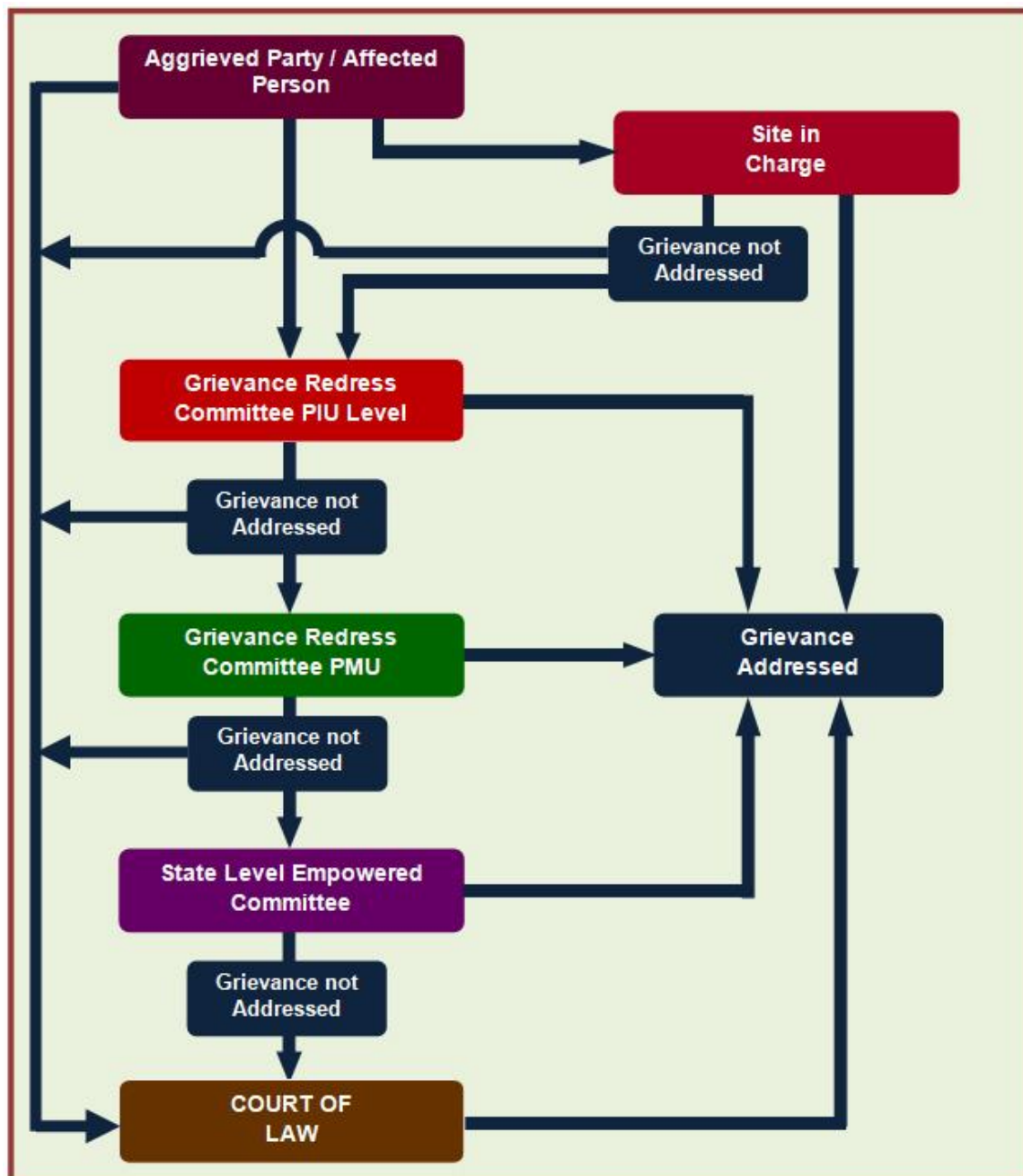
108. **PIU Level Grievance Redress Committee (GRC- PIU)** – This committee will comprise of Project Manager, Site In charge and one officer from contractor team. The GRC- PIU will be headed by Project Manager (PIU). It will meet at least once a month. The agenda of the meeting will be circulated to all the members and the affected persons/aggrieved party along with venue, date and time at least a week prior to the meeting. The matters shall remain with GRC at PIU level for one month. If the grievance is not resolved within this time period, then it will be referred to GRC at PMU.

109. **GRC at PMU.** There shall be one GRC in PMU. The matters not resolved by the GRC at PIU level within one month shall come under GRC at PMU. GRC at PMU will include the Managing Director, HPKVN, and Project Manager PIU (at PWD Head quarters Shimla), safeguard specialists (Environmental and Social) of the PMU, and one representative from concerned Department (DOTE/DOLE/DOHE). The Committee shall be headed by the Managing Director, HPKVN. This committee shall look into the matters, which are referred to and not resolved by GRC at PIU level. If the matter is not resolved by the GRC at PMU level within one month of time, then the aggrieved person or party can bring the matter to State Level Empowered Committee (SLEC) which is in-charge of the overall HPSPDP. In case grievance is not readdressed by the SLEC, then complainant can reach to the court of law. It may further be mentioned that aggrieved person or party is free to approach court of law any time during grievance redressal process.

110. **Approach to GRC.** Affected person or aggrieved party can approach the GRC for redress of his/their grievances through any of the following modes:

- Web based: A separate corner will be developed at the HPKVN website so that public and affected person can register their complaints in the online column.
- Telecom based: A telephone number will be displayed at the web site of HPKVN and the construction site (s) of sub projects so that general public can register their complaint through telephone and mobile phone to the PIU and PMU office. One complaint register will also be maintained at sub-project construction site. The grievance redress mechanism for the HPSPDP for safeguards related issues has been shown below in **Figure-12**:

Figure-12: Grievance Redress Mechanism (HPSDP Project)



VII. FINDINGS AND RECOMMENDATIONS

111. The proposed sub-project components do not involve any interventions in and around the natural and cultural heritage destinations and have less significant (direct and indirect) environmental impacts. It is expected that the proposed sub-project will provide counseling to skilled local Himachali youth in selection of jobs and will also facilitate interviews for jobs at the MCC through interacting with local industries at Kala Amb and Paonta Sahib.

112. This IEE has identified minor likely impacts on water, air and noise during construction and operation period and has defined mitigation measures. Those mitigation measures will be implemented and monitored during the sub-projects execution. The overall environmental quality of sub-project surroundings will not be affected as a result of operating the MCC as adequate sanitation facilities have been planned.

113. The specific management measures laid down in the IEE will effectively address any adverse environmental impacts due to the sub-project. The effective implementation of the measures proposed will be ensured through the building up of capacity towards environmental management within the PMU supplemented by the technical expertise of Safeguards Specialists of the PMC. Further, the environmental monitoring plans provide adequate opportunities towards course correction to address any residual impacts during construction or operation Phase.

VIII. CONCLUSIONS

114. On the basis of the IEE, it is expected that the proposed sub-project components have only minor, localized, temporary and insignificant environmental impacts. These can be easily mitigated through adequate mitigation measures and regular monitoring during the design, construction and post construction phases of the sub-project. Negative impacts on water, air quality and noise levels during civil works & operation phase, which will be appropriately monitored and adequately mitigated. This report has not identified any comprehensive, broad, diverse or irreversible adverse impacts caused by the sub project. Based on the findings of the IEE, the classification of the sub-project as Category “B” is confirmed. No further special study or detailed EIA needs to be undertaken to comply with ADB SPS (2009).

ANNEXURE-1: RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST

Instructions:

- (i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES) for endorsement by Director, RSES and for approval by the Chief Compliance Officer.
- (ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.
- (iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title:

India/ Supporting Skill Development in Himachal Pradesh

SAHS

Sector Division:

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area adjacent to or within any of the following areas:			There is proposal to construct a building for proposed MCC at Nahan. The site of proposed MCC building is located beyond 25 km distance from the (a) core and buffer zones of national parks, sanctuaries, tiger reserves, and biosphere reserves, etc. There are no structures or monuments of archaeological importance within the aerial distance of 300 m from the proposed MCC site.
▪ Underground utilities		√	The proposed site is Government owned vacant plot. At the site no underground utilities have been reported by the civic authorities.
▪ Cultural heritage site		√	No cultural heritage site within 25 km distance from the MCC site.
▪ Protected Area		√	No protected areas within 25 km distance from the MCC site.
▪ Wetland		√	The site is in undulating hilly terrain. There is no wet land in the vicinity.
▪ Mangrove		√	The site of MCC is away from coastal area. So this is not applicable.
▪ Estuarine		√	There is no estuary as site is away from coastal areas.
▪ Buffer zone of protected area		√	The site is within the urban habitation of Nahan city.
▪ Special area for protecting biodiversity		√	There are no areas identified for protecting biodiversity within 25 km from the site.

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Screening Questions	Yes	No	Remarks
▪ Bay		√	The MCC site is away from coastal area, so this is not applicable.
B. Potential Environmental Impacts Will the Project cause...			
▪ Encroachment on historical/cultural areas?		√	The subproject will not cause any encroachment on historical or cultural areas as these are not there within 1 km aerial distance.
▪ Encroachment on precious ecology (e.g. sensitive or protected areas)?		√	The proposed MCC site is not located in any reserved or protected forest.
▪ Impacts on the sustainability of associated sanitation and solid waste disposal systems?		√	The sanitation facilities will be self-sustained (septic tanks planned at MCC building) and solid waste collection and disposal will be integrated with the Nahan city waste disposal facilities.
▪ Dislocation or involuntary resettlement of people?		√	The proposed site for MCC is on Government owned land. There are also no encroachers or squatters at site, therefore, there are no Involuntary Resettlement issues.
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		√	The MCC site is encumbrance free Government land. The Nahan city is not habitat of indigenous people. The MCC subproject will not have any adverse impact on children or vulnerable groups. Since MCC will provide counseling and facilitate interviews for skilled youth, so a positive impact is anticipated as a whole.
▪ Accident risks associated with increased vehicular traffic, leading to loss of life?		√	The proposed MCC site is within inhabited area of Nahan city and on well-connected wide road. Since the built up area of MCC building is <800 m ² area, therefore, traffic increase during construction will be insignificant. During operation also traffic increase is not anticipated as candidates visiting will be local and outside plot there is open area. However, to rule out any accident due to project related vehicular traffic, if required, flagmen will be deployed near the sub-project construction site to regulate the traffic. Traffic Management Plan will be prepared for the construction phase.

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Screening Questions	Yes	No	Remarks
▪ Increased noise and air pollution resulting from increased traffic volume?		√	Since increase in the traffic is not anticipated, therefore, no increase in air and noise pollution is anticipated.
▪ Occupational and community health and safety risks?		√	The MCC activities will not cause any occupational and community health and safety risks.
▪ Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		√	No such risks are anticipated
▪ Generation of dust in sensitive areas during construction?		√	No generation of dust during the operation phase. Minor dust generated during construction activities will be controlled through dust suppression measures and through implementation of Environmental Management Plan (EMP).
▪ Requirements for disposal of fill, excavation, and/or spoil materials?		√	The proposed MCC site is on undulating terrain. The design of building has been carried out considering natural slope. The cut is not expected to be generated. No filling is required. Minor excavations for foundations will be done. Any spoil generated will be utilized in construction and remaining, if any, will be disposed off at the identified site. The site for disposal will be identified during the construction phase.
▪ Noise and vibration due to blasting and other civil works?		√	No blasting is planned. The noise due to construction activities will be controlled within the stipulated limits through implementation of EMP.
▪ Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction?		√	No requirement for draining of water from the subproject site.
▪ Long-term impacts on local hydrology as a result of building hard surfaces in or near the building?		√	The proposed built up area of MCC is around 620 m ² and this small area will not cause any impact on local hydrology. Further, site is already in inhabited area. So construction of MCC building is of no consequence from hydrology point of view.

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Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)? 		√	<p>Since MCC building to be constructed is small in size, so construction force will not exceed 50 at any point of time at the site. The construction workers will be mainly locals so no influx is anticipated during the construction.</p> <p>During operation phase also job seekers will be locals and day time visitors from the Nahan city and surrounding area, so no influx and impacts on social infrastructure are anticipated.</p>
<ul style="list-style-type: none"> Social conflicts if workers from other regions or countries are hired? 		√	<p>Preference will be given to locally available labor. The construction activities are limited in nature. In case workers are hired from other regions, requisite awareness programs and consultations with the locals will be organized to avoid social conflicts.</p>
<ul style="list-style-type: none"> Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation? 		√	<p>Since proposed MCC building is new, the safety measures are being planned in the building design as per national and state level requirements.</p>
<ul style="list-style-type: none"> Risks to community health and safety caused by management and disposal of waste? 		√	<p>During construction phase waste collection and disposal system will be planned by the contractor and it will be approved by the implementing agency (PWD). For operation phase adequate provisions have been made in the building design to take care disposal of waste water and other solid waste generated. The waste disposal will be integrated with the local disposal systems.</p>
<ul style="list-style-type: none"> Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning? 		√	<p>The proposed MCC site is within the built-up area of Nahan city. Specific community risks are not foreseen due to operation as such as the subproject site has good connectivity through National and State Highways. The MCC building has been designed following applicable seismic coefficient for Himachal Pradesh to build safety in structural design. There will be periodic maintenance of buildings during the operation phase.</p>

A Checklist for Preliminary Climate Risk Screening

Country/Project Title: India /Himachal Pradesh Skill Development Project
Sector: Social
Subsector: Skills
Division/Department: SAHS

	Screening Questions	Score	Remarks ⁵
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides?	0	The proposed MCC building is in habituated area. The site is not at location prone to floods, storms or landslides. The MCC site is away from river and streams.
	Would the project design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc.)?	0	Not Applicable
Materials and Maintenance	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?	0	Weather conditions at proposed MCC site do not demand usage of any specific construction material to counter act weather phenomenon.
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s)?	0	No, weather conditions at selected sites do not require specific scheduling for maintenance.
Performance of project outputs	Would weather/climate conditions and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro-power generation facilities) throughout their design life time?	0	Not Applicable

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any

⁵ If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response will be categorized as high risk project.

Result of Initial Screening (Low, Medium, High): Low Risk

Other Comments: None

Prepared by: Shreeniwas Verma, Environmental Safeguard Specialist

ANNEXURE-2: LAND RECORDS CERTIFIED BY THE REVENUE DEPARTMENT OFFICIALS SHOWING GOHP OWNERSHIP FOR MCC NAHAN SITE

No:-Peshi-H-8(50)/2016-
OFFICE OF THE DISTRICT COLLECTOR,
DISTRICT SIKHMAUR AT NAHAN (H.P.)

Dated, Nahani, the July, 2016.

ORDER OF TRANSFER OF POSSESSION OF GOVERNMENT LAND.

Sr.	Point of case	Details/Remarks
1	Description of proposed land and its classification.	Khata Khatam No. 233min 439min Khasra No. 21192-1 measuring 316-25 Sq.Mtrs. Galt of Khasra No. 2119 measuring 4332-38 Sq. Mtrs. Mohai Naya Bazar, Nahani Tehsil, Nahani its classification is "Gair Mumukha Ahata"
2	Present ownership and possession on the proposed land.	The land is under the ownership of Govt. of H.P. and in possession of Revenue Deptt.
3	Name of Government Department to whom land is to be transferred.	Labour & Employment Deptt.
4	Detail of facts if the case falls under the directions of any Court.	--No--
5	NOCs of the Departments like :	--No--
	(a) Forest Department (including applicability of FCA - 1980).	Not applicable.
	(b) Public Works Department	Before carrying out any construction work etc. on the said land, relevant permission/clearance shall be obtained by the transferee from the concerned Department.
	(c) ICP Department	Before carrying out any construction work etc. on the said land, relevant permission/clearance shall be obtained by the transferee from the concerned Department.
	(d) From present owner/possessor of land.	The land is under the possession of Revenue Deptt.
6	Name of Act under which proposed land was vested to the Govt. and in which pool it was kept and after transferring the proposed land, how much land will remain in balance under both the pools.	The proposed land does not fall under any pool.
7	Detail of any encroachment public places/religious institutions/burial ground/cremation ground and trees etc on proposed land.	No--
8	If necessary NOC of concerned Gram Panchayat and statements of concerned	Not applicable.

	residents of the area duly attested by the Revenue Officer concerned be obtained and attached with the case.	
9	Status of land being free from all encumbrances.	Land is free from all encumbrances.
10	Purpose of transfer of land.	C/o Model Career Centre
11	Gist of report on Form-I duly signed by Patwari concerned and Tehsildar concerned.	Case has been recommended by the Naib-Tehsildar, Dadahu at Column No. 19 of Form-I.

Now, therefore, in view of the facts mentioned above, I, B.C. Badalia, IAS, District Collector, Distt. Sirmaur at Nahan in exercise of the powers vested in me vide letter No. Rev-D(G)-6-24/91 dated 09-07-1991 of Revenue Department, Govt. of H.P., do hereby order to transfer the possession of said land situated Mohal Naya Bazar, Nahan District Sirmaur, H.P. from Revenue Deptt to Labour & Employment Deptt. for above mentioned purpose on the following conditions:-

1. The said land will be utilised by the user department within two years from the date of issuance of this order failing which the said land will be resumed to the Revenue Department.
 2. Before carrying out any construction work etc. on the said land, relevant permission clearance shall be obtained by the transferee from all the concerned Departments.
- The Tehsildar, Nahan is requested to take further necessary action accordingly and hand over the possession of the said land to concerned Department.

Endst. No. As above.
Copy forwarded to the following:-

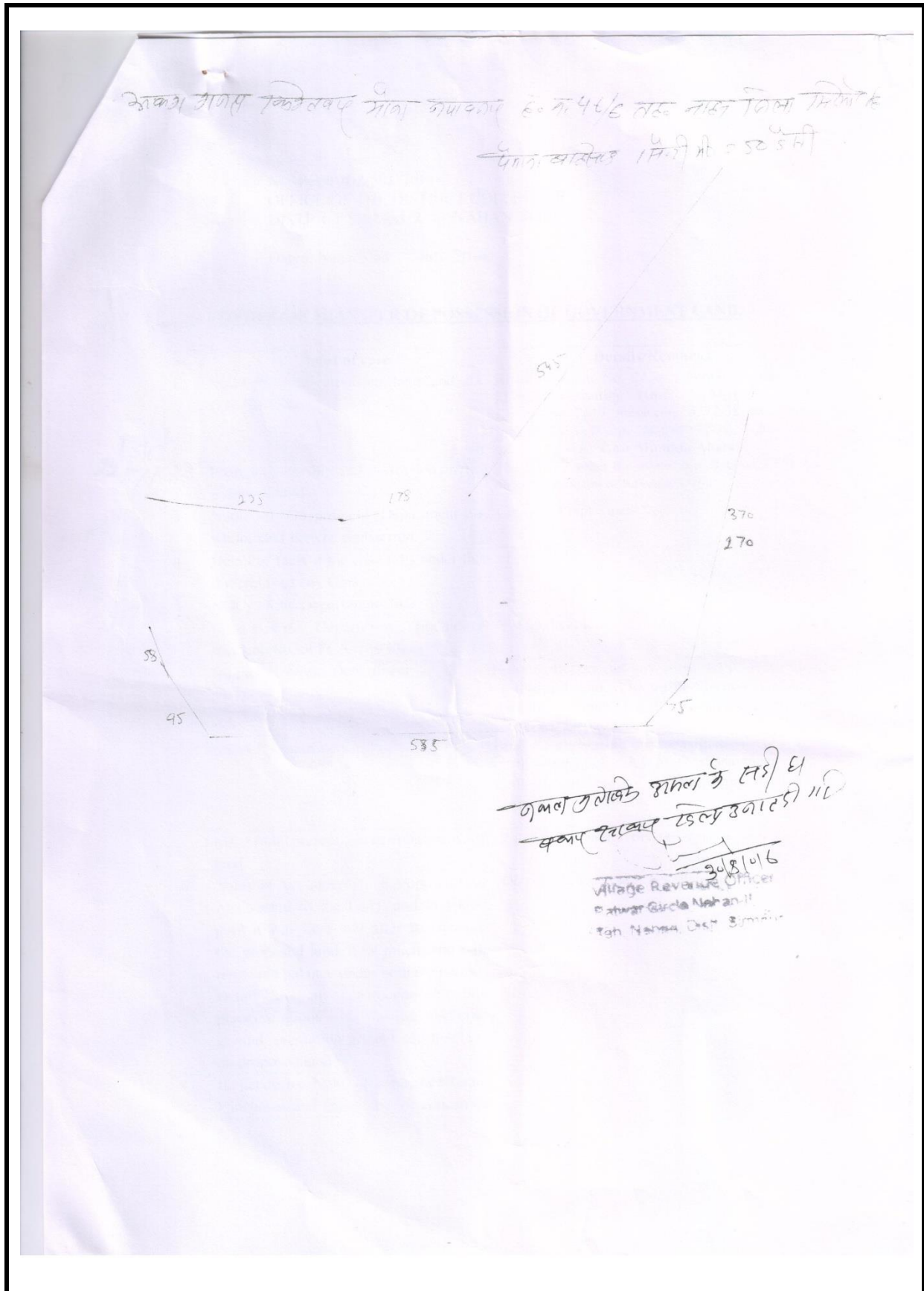
Dated, Nahan, the

12/4/18
21/7/16

(B.C. Badalia) IAS,
District Collector, Sirmaur,
March, 2016

1. The Divisional Commissioner Shimla Division Shimla for information please.
2. The District Employment Officer, Nahan for information. *21/7/16*
3. The Tehsildar, Nahan, Distt. Sirmaur. He is also requested to make necessary entries in the revenue record as per copy of jamabandi attached and submit compliance report alongwith the revenue papers to this office at the earliest. He is further requested to furnish status report regarding utilisation of said land after the expiry of said prescribed period of two years to this office. The revenue papers of the concerned land are enclosed herewith.

Badalia
(B.C. Badalia) IAS,
District Collector, Sirmaur,
21/7



D.T. K. FOWLER

ANNEXURE-3: SAMPLE TRAFFIC MANAGEMENT PLAN

A. Principles

1. Since the scale of construction work at the sub-projects sites is relatively small, there will not be any major or prolonged disruption of local traffic. Nevertheless, it is good to prepare a traffic management plan (TMP) to minimize and avoid public inconvenience to the extent feasible. This indicative TMP will ensure the safety of all the road users along the work zone and minimize public inconvenience. It addresses the following issues:

- (i) The safety of pedestrians, bicyclists, and motorists travelling through the construction zone;
- (ii) Protection of work crews from hazards associated with moving traffic;
- (iii) Avoiding traffic congestion and
- (iv) Maintenance of access to adjoining properties.

B. Operating Policies for TMP

2. The following principles will help to promote safe and efficient movement for all road users (motorists, bicyclists, and pedestrians, including persons with disabilities) through and around work zones while reasonably protecting workers and equipment.

- (i) Make traffic safety and temporary traffic control an integral and high-priority element of every project from planning through design, construction, and maintenance.
- (ii) Inhibit traffic movement as little as possible.
- (iii) Provide clear and positive guidance to drivers, bicyclists, and pedestrians as they approach and travel through the temporary traffic control zone.
- (iv) Inspect traffic control elements routinely, both day and night, and make modifications when necessary.
- (v) Pay increased attention to roadside safety in the vicinity of temporary traffic control zones.
- (vi) Keep the public well informed.
- (vii) Make appropriate accommodation for abutting property owners, residents, businesses, emergency services, railroads, commercial vehicles, and transit operations.

C. Analyze the impact due to street closure, if required

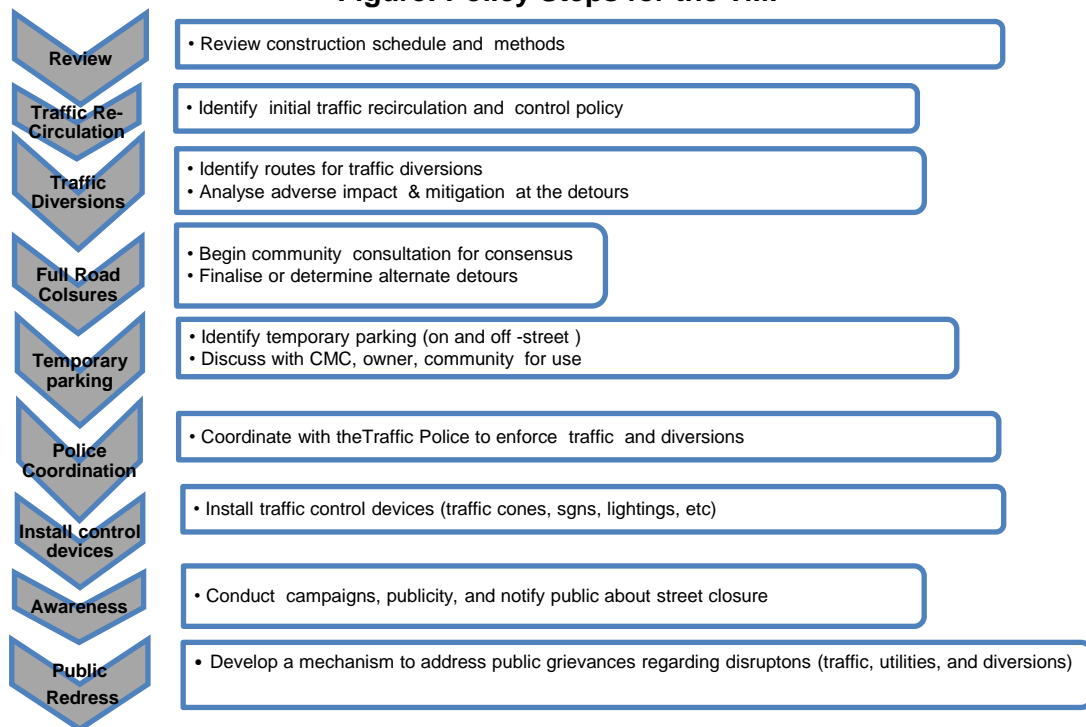
3. A final decision to close a particular street and divert the traffic should involve the following steps:

- (i) approval from the PIU and local administration to use alternative local streets as detours;
- (ii) consultation with businesses, community members, traffic police, PWD, etc, regarding the mitigation measures necessary at the detours where the road is diverted during the construction;
- (iii) determining of the maximum number of days allowed for road closure, and incorporation of such provisions into the contract documents;
- (iv) determining if additional traffic control or temporary improvements are needed along the detour route;
- (v) considering how access will be provided to the worksite;
- (vi) contacting emergency service, school officials, and transit authorities to determine if there is any effect on their operations; and

- (vii) Developing a notification program to keep the public informed. As part of this program, the public should be advised of alternate routes that commuters can take or will have to take as result of the traffic diversion.

4. If full road-closure of certain streets within the area is not feasible due to inadequate capacity of the detour streets or public opposition, then full closure can be restricted to weekends with the construction commencing on Saturday night and ending on Monday morning prior to the morning rush hour traffic.

Figure: Policy Steps for the TMP



D. Public awareness and notifications

5. The PWD and the contractors will issue timely notifications to inform the public about the following issues:

- (i) Road blockages and alternative routes along with the duration (as applicable)
- (ii) Traffic control devices placed around the construction zones (signs, traffic cones, barriers, etc.);
- (iii) Reduced speed limits to be enforced at the work zones and traffic diversions.

8. It may be necessary to conduct an awareness campaign on road safety during construction. It will target relevant groups i.e. children, adults, and drivers. Therefore, these campaigns will be conducted in schools and community centers. In addition, the project will publish a brochure for public information. These brochures will be widely circulated around the area and will also be available at the PIU, and the contractors' site office. The text of the brochure should be concise to be effective, with a lot of graphics. It will serve the following purpose:

- (i) Explain why the brochure was prepared, along with a brief description of the project;
- (ii) Advise the public to expect the unexpected;

- (iii) Educate the public about the various traffic control devices and safety measures adopted at the work zones;
- (iv) Educate the public about the safe road user behaviour to emulate at the work zones;
- (v) Tell the public how to stay informed or where to inquire about road safety issues at the work zones (name, telephone, mobile number of the contact person; and
- (vi) Indicate the office hours of relevant offices.

E. Vehicle Maintenance and Safety

10. A vehicle maintenance and safety program shall be implemented by the construction contractor(s). The contractor(s) should ensure that all the vehicles are in proper running condition, and comply with roadworthy and meet certification standards of GOHP. All vehicles should be in good condition and meet the pollution standards of Government of India and GOHP. The drivers will follow the special code of conduct and road safety rules of GOHP. They will ensure that all loads are covered and secured. Vehicles will be cleaned and maintained in designed places.

F. Install traffic control devices at the work zones and traffic diversion routes

10. The purpose of installing traffic control devices at the work zones is to delineate these areas to warn, inform, and direct the road users about a hazard ahead, and to protect them as well as the workers. As proper delineation is key for achieving the above objective, it is important to install good traffic signs at the work zones. The following traffic control devices will be used in work zones:

- Signs
- Pavement Markings
- Channelizing Devices
- Arrow Panels
- Warning Lights

11. Procedures for installing traffic control devices at any work zone vary depending on road configuration, location of the work, construction activity, duration, traffic speed and volume, and pedestrian traffic. Work will take place along major roads, and the minor internal roads. As such, the traffic volume and road geometry vary. However, regardless of where the construction takes place, all the work zones should be cordoned off, and traffic shifted away at least with traffic cones, barricades, and temporary signs (temporary “STOP” and “GO”).

12. The work zone should take into consideration, the space required for a buffer zone between the workers and the traffic (lateral and longitudinal) and the transition space required for delineation, as applicable. For the works, a 30 cm clearance between the traffic and the temporary STOP and GO signs should be provided. In addition, at least 60 cm is necessary to install the temporary traffic signs and cones.

13. Traffic police should regulate traffic away from the work zone and enforce the traffic diversion result from full street closure in certain areas during construction. Flaggers or personnel should be equipped with reflective jackets at all times and have traffic control batons (preferably the LED type) for regulating the traffic during night time.


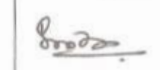
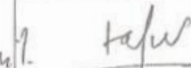
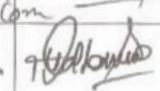





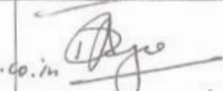
14. In addition to the delineation devices, all the construction workers should wear fluorescent safety vests and helmets in order to be visible to the motorists at all times. There

should be provision for lighting beacons and illumination for night constructions. The PIU and contractor will coordinate with the local administration and traffic police regarding the traffic signs, detour, and any other matters related to traffic. The contractor will prepare the traffic management plan in detail and submit it along with the EMP for the final approval.

ANNEXURE-4: PHOTOGRAPHS AND ATTENDANCESHEETSOFCONSULTATIONS

A. Attendance Sheet

Attendance Sheet of the meeting held on 18-3-2016 at 11.00 AM in Conference Hall Yojna Bhawan, Shimla-2 with ADB consultants regarding Himachal Pradesh Skill Development Project.

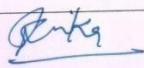

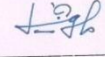
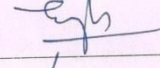
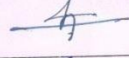
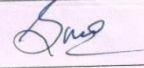
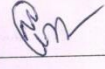
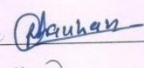

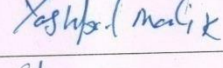
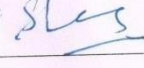
Sr. No.	Name of the Officer and Designation	Mobile No. / e-mail address.	Signature
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2	Dr. D.K. Sharma, Sr. Engr. Engineer	9418027098 pcbseashimla@gmail.com	
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4	Er. Umesh Pathania Technical Officer & Estate Officer State Council Science Tech. & Env. & DEST.	9418310231 umeshpathania@hotmail.com	
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9	Basab Basu TVET Expert	7838577785	
10	DEEPAK ANGRA HOD(EE) DTE Sundernagar	9418107688 angradeepak@yahoo.co.in	

IND 49108-002: Supporting Skill Development in Himachal Pradesh
Stakeholder Consultations

Date : 07 05 2018

Location: Nahan LMCC

Planned Facility:

S. No.	Name	Designation	Phone Number	Signature
1	SONIKA	Data Entry opt.	9736177019	
2	Babita Devi	Data Entry Operator	9418373701	
3	Dalvir Singh Rana	Assistant Engineer	98161-86633	
4	Gurman Singh	Dist. Emp. Officer	94187 41247	
5	Sanjay Kumar	Substn. Asst.	7807069930	
6	B.S. Verma	Substn. Asst.	9418287007	
7	Narender Tyagi	District Co-ordinator	9418469181	
8	Randeep Chauhan	D.E.O	9857358899	
9	Umesh Ashraf Ali	Work Supervisor	9736267868	
10	Yashpal Malik	Consultant	905040455	
11	Shravan Kumar	Comm. Asst.	9811224458	
12				
13				
14				

B. Photographs of consultations at Nahan

