



SEISMIC RESILIENCE AND ENERGY EFFICIENCY  
IN PUBLIC BUILDINGS PROJECT  
**(SREEPB PROJECT)**

ISTANBUL TECHNICAL UNIVERSITY  
AYAZAGA CAMPUS VADI SECTION (VADI DORMITORIES)

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

FEBRUARY  
**2024**



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## Abbreviations

BU	Bogazici University
BP	Bank Procedure
CİMER	Presidency's Communication Center
E&S	Environmental and Social
EA	Environmental Assessment
EIA	Environmental Impact Assessment
ESF	Environmental and Social Framework
EHS	Environment, Health, and Safety
ESS	Environmental and Social Standards
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
MoEUCC	Ministry of Environment, Urbanization, and Climate Change
WB	World Bank
dBA	Noise Reduction and Control
dBC	Noise Rating Measure
LOTO	Lock Out-Tag Out
SPP	Solar Power Plant
ILO	International Labor Organization
M&E	Monitoring and Evaluation
ITU	Istanbul Technical University
OHS	Occupational Health and Safety
SREEPB	Seismic Resilience Energy Efficiency Public Buildings
PPE	Personal Protective Equipment
Consultant	Tümaş & ATLASCert® & Hill Joint Venture
PIU	Project Implementation Unit
PV	Photovoltaic Panel
SGI	Social Security Institution
GM	Grievance Mechanism
GDCA	General Directorate of Construction Affairs

## Executive Summary

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Seismic Resilience and Energy Efficiency in Public Buildings Project (SREEPB) focuses on seismic retrofitting and energy efficiency in public buildings such as higher education buildings, dormitories, social service institutions, hospitals, and government residences, particularly those at high seismic risk and with low energy efficiency. This project, with the reference number WB/CS-DESSUP-01, covers 32 structures on 11 campuses, including Bogazici University (BOUN), Marmara University, Istanbul Technical University (ITU), Istanbul University, Sakarya Government Residence, and two student dormitories in Kocaeli.

This document provides information about the structural retrofitting and energy efficiency-focused improvement works for the Vadi Section (Vadi Student Dormitory B, C, D, E Blocks, and Dining Hall) within the ITU Ayazaga Campus. It discusses the national and international regulations applicable to these works and outlines measures to keep or eliminate potential adverse environmental and social impacts during the implementation. The document also covers occupational health and safety measures. Additionally, this Environmental and Social Management Plan (ESMP) includes details about stakeholder engagement activities to be conducted within the project and establishes a Grievance Mechanism (GM). It outlines the roles and responsibilities of relevant parties involved in the project.

## Introduction

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This Environmental and Social Management Plan (ESMP) has been prepared within the scope of the Seismic Resilience and Energy Efficiency in Public Buildings Project (SREEPBP). It aims to identify measures to be taken to ensure that the potential adverse environmental and social impacts and risks arising from the structural retrofitting and energy efficiency-focused renovation activities to be carried out in the dormitory building consisting of four blocks (B, C, D, E) and the dining hall building at Istanbul Technical University Ayazaga Campus Vadi Section, located at Mirgün Mahallesi, Kırgülü Çıkmazı No:16, Sarıyer/Istanbul, are kept at an acceptable level or eliminated.

First and foremost, this ESMP has been prepared in accordance with Turkish legislation and, in addition, aligns with the policies, standards, and measures of the World Bank (WB). It clearly outlines who will implement the measures, when, how frequently, and in what manner during the various stages of project implementation.

# 1. General Project and Project Area Information

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## 1.1 Project Description

### 1.1.1. General Information and Objectives

The general purpose of the Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project; is to strengthen public buildings (educational buildings, dormitories, hospitals and administrative buildings) that are inefficient in terms of energy use and have a high earthquake risk, against earthquakes and to ensure energy efficiency.

The aim of the project is to determine the behavior of the ground and structural systems of existing public buildings with different uses against earthquakes and to eliminate the risks by structurally retrofitting them, as well as to make improvements in terms of energy efficiency, to reduce energy consumption and CO2 emissions, to monitor and control energy consumption, to close the current deficit due to energy, and to develop the sector and raise awareness by creating a model for making all public buildings in Türkiye energy efficient after the project.

SREEPB Project ensures that existing buildings are strengthened against earthquakes and made more efficient, as well as increasing social awareness about earthquakes and energy efficiency.

Throughout the project, structural retrofitting works include building load-bearing system improvements and additions, as well as activities such as grouting and micro piling related to ground reinforcement (*limited only to the floors of the buildings in scope*), if required. Studies focused on energy efficiency include facade and roof insulation, replacement of facade components such as windows and doors, mechanical system revisions, air conditioning system replacements, ventilation system revisions and replacements, integration of building energy monitoring and automation systems into the existing electrical system, electricity generation through solar panel installation.

Within the scope of the Environmental and Social Standards defined in the World Bank's Environmental and Social Framework (ESF), the SREEPB Project must ensure that the activities to be carried out will not create irreversible negative environmental and social impacts and risks, and that the possible impacts/risks are temporary and reversible. The Environmental Risk Rating is accepted as "Moderate" level since it is at a moderate level in terms of size and quality and the sub-project sites are not in sensitive areas in terms of environmental, social risks and impacts. They are also not expected to have serious adverse effects on human health and the environment.

All of the structures covered by this ESMP are located within the Istanbul Technical University Ayazaga Campus for Vadi Dormitories and dining hall. Other buildings/structures outside the university or the district are not directly affected by the project activities. In addition, the structures within the scope of the campus are currently vacant. Therefore, there is no impact on building users from the project activities.

This ESMP (Environmental and Social Management Plan) has been prepared as a guidance document for the SREEPB Project to eliminate or, if not entirely possible, reduce to an acceptable level its environmental impacts such as waste generation (hazardous and non-hazardous), air and water pollution, as well as its impacts and risks on public health, safety, and occupational health and safety (OHS), in compliance with the requirements of the World Bank (WB) and relevant national legislation.

The project, funded by the World Bank (WB), will be carried out by the Ministry of Environment, Urbanization, and Climate Change (MoEUCC) General Directorate of Construction Affairs (GDCA). GDCA will be responsible for the overall implementation, control, management, and coordination of the project. The consulting firm will be responsible for preparing and supervising the implementation

of the Environmental and Social Management Plan (ESMP), while the contractor will be responsible for the on-site implementation of the ESMP.

### 1.1.2 Project Information

The project will be carried out in the Istanbul Technical University Ayazaga Campus Vadi Section. The structures in question are located in the area with the coordinates provided in Table-2, on a total of 69,407 m<sup>2</sup> in the title deed under Parcel 1 of Block 1814. The satellite image of Istanbul Technical University Ayazaga Campus Vadi Section and detailed information about the buildings in the area are provided in Figure 1 and Table 1, respectively.



**Figure 1: BUILDINGS INCLUDED IN THE SCOPE OF ITU AYAZAGA CAMPUS VADI SECTION PROJECT**



**Table 1: BUILDING GENERAL INFORMATION**

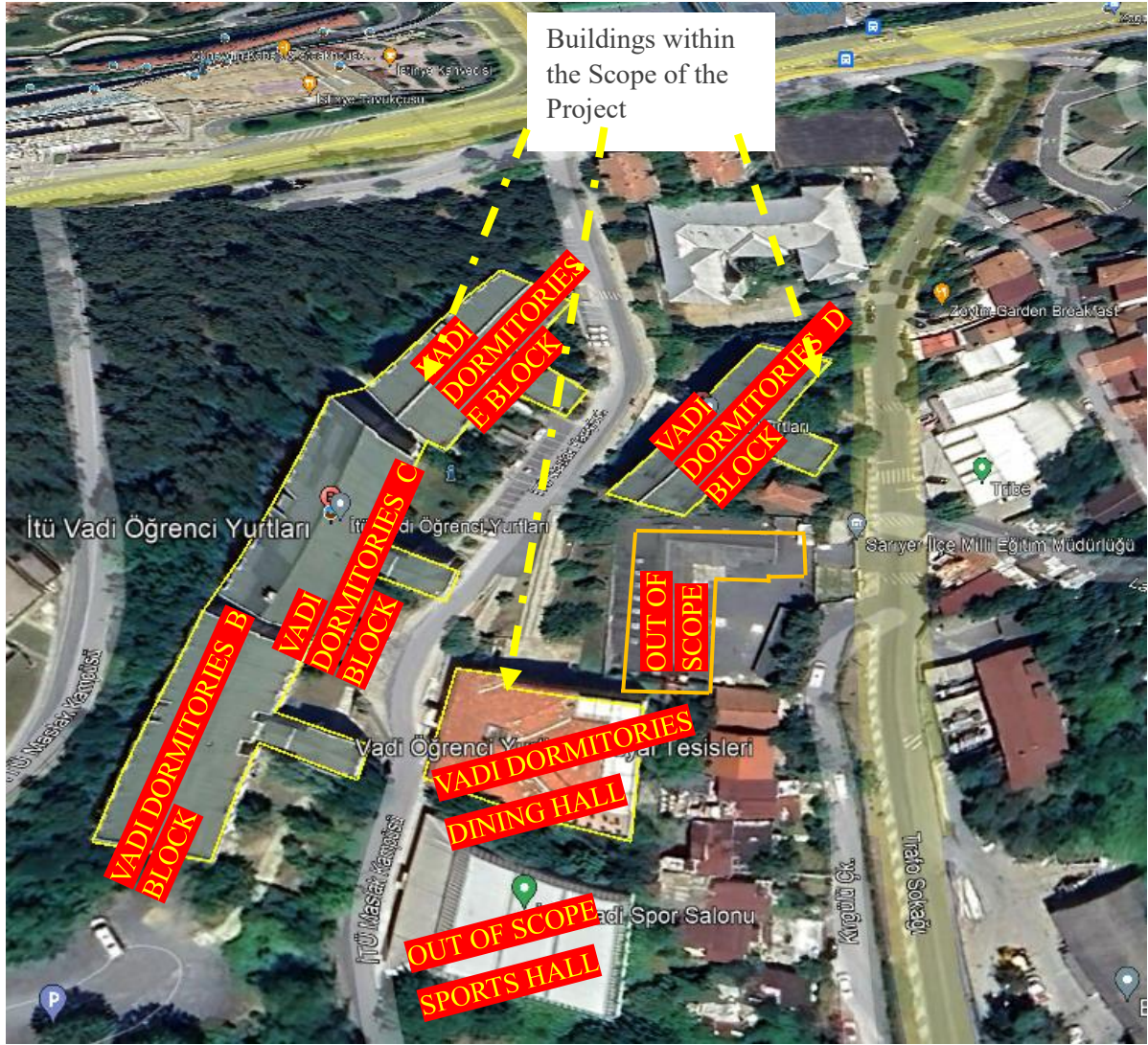
<b>CAMPUS NAME</b>	Istanbul Technical University Ayazaga Campus Vadi Section
<b>BUILDING NAMES</b> <i>(included in the project)</i>	<ul style="list-style-type: none"> <li>• Dormitory Building-B Block - (5.150 m<sup>2</sup>)</li> <li>• Dormitory Building-C Block - (5.180 m<sup>2</sup>)</li> <li>• Dormitory Building-D Block - (5.160 m<sup>2</sup>)</li> <li>• Dormitory Building-E Block - (5.180 m<sup>2</sup>)</li> <li>• Dining Hall Building - (1.350 m<sup>2</sup>)</li> </ul>
<b>PROVINCE</b>	İSTANBUL
<b>DISTRICT</b>	SARIYER
<b>NUMBER OF USERS</b>	~410 people/day
<b>BUILDING INFORMATION</b>	
<b>CONSTRUCTION AREA</b>	~22.020 m <sup>2</sup>
<b>PROJEYE THE PLANNED WORKS TO BE CARRIED OUT IN ALL BUILDINGS INCLUDED IN THE PROJECT</b>	
<b>STRUCTURAL RETROFITTING</b>	<ul style="list-style-type: none"> <li>• Existing load-bearing system reinforcement</li> <li>• Additional load-bearing system manufacturing</li> <li>• Floor, ceiling, wall and door renovations due to structural retrofitting activities</li> </ul>
<b>ENERGY EFFICIENCY</b>	<ul style="list-style-type: none"> <li>• Facade and roof thermal insulation</li> <li>• Door replacements</li> <li>• Circulation system engine/pump replacements</li> <li>• Non-insulated installation elements, thermal insulation installation for heat exchangers</li> <li>• Central boiler replacements</li> <li>• Lighting element replacements (one-to-one replacements will be carried out, electrical installation intervention (line, column line replacement, etc.) is out of the question)</li> <li>• Self-consumption-oriented solar power plant facility (on the roof) (to be integrated into the existing supply line)</li> <li>• Energy monitoring and automation system facility (to be integrated into the existing electrical system)</li> <li>• Mechanical automation and energy measurement monitoring system</li> </ul>
<b>DURATION AND SEASON OF ACTIVITIES</b>	
All the activities to be carried out within the scope of the project will be completed between the first quarter of 2024 and the fourth quarter of 2024. The contractor is obligated to complete the work on the buildings within the planned timeframe as specified in the Job Description. Additionally, the Contractor will inform all stakeholders clearly and in advance about the construction activities' schedule before commencing any construction work.	
<b>DURATION AND SEASON OF ACTIVITIES</b>	
The total estimated number of workers in the buildings is expected to be an average of 90 personnel per day.	

### 1.1.3 Locations of Campus & Buildings

The satellite image showing the campus boundaries is presented in Figure 2.



Figure 2: ITU AYAZAGA CAMPUS VADI SECTION (1814 BLOCK, 1 PARCEL)



**Figure 3: ITU AYAZAGA CAMPUS VADI SECTION PROJECT AREA AND BUILDINGS IN THE SCOPE**

The potential negative effects that may arise during the retrofitting and improvement construction of the buildings will primarily occur inside the building. Since there is no need for ground improvement works, the external impacts such as noise and dust generation, increased traffic, parking problems, and visual effects affecting surrounding buildings will be limited to an impact distance of 100 meters, as shown in Figure 5.



**Figure 4: VISUAL OF THE STRUCTURES COVERED BY ITU AYAZAGA CAMPUS VADI SECTION PROJECT.**

**Table 2: Istanbul Technical University Ayazaga Campus Vadi Section Coordinates**

Vadi Dormitories Block B, C, E			Vadi Dormitories Block D		
No	Longitude	Latitude	No	Longitude	Latitude
1	29.03501952083354	41.10800668820801	23	29.03592037077454	41.10908458088275
2	29.03521030960534	41.10800751794656	24	29.03606705249613	41.10931750060105
3	29.03521869180907	41.10826436665346	25	29.03621774764169	41.10923621963176
4	29.03539236283125	41.10824668703034	26	29.03626816889988	41.10932590724395
5	29.03539096898677	41.10834007122119	27	29.03612804540817	41.10940551022007,0
6	29.03521958947001	41.10835525076818	28	29.03625287984887	41.10958783017672,0
7	29.03522070301223	41.1085725566642	29	29.03606829682297	41.10965676335628,0
8	29.03526201259766	41.10883274735429	30	29.03573975974419	1.10915214150896,0
9	29.03543849749542	41.10880327760217	<b>Dining Hall</b>		
10	29.03545116523911	41.10889038501216	31	29.03549421929813	41.10830533688344,0
11	29.03527025493304	41.10892463386245	32	29.03587440963313	41.10829419287793,0
12	29.03532684696122	41.10921484380462	33	29.03587343966878	41.10857488457425,0
13	29.03537017967424	41.10921164371694	34	29.03559633790753	41.10857900271458,0
14	29.03545864661577	41.10942314366092	35	29.0355929424271,	41.10860880491284
15	29.03561906546030	41.10938304572606	36	29.03549541230458	41.10861260338525,0
16	29.03566186587941	41.10946620676106			
17	29.03550296335057	41.10953695962132			
18	29.03559275174052	41.10973951400056			
19	29.0354053236365	41.10980907147331			
20	29.03518292580291	41.10926810351056			
21	29.03512242852904	41.10919818798289			
22	29.03502515059276	41.10857444436687			

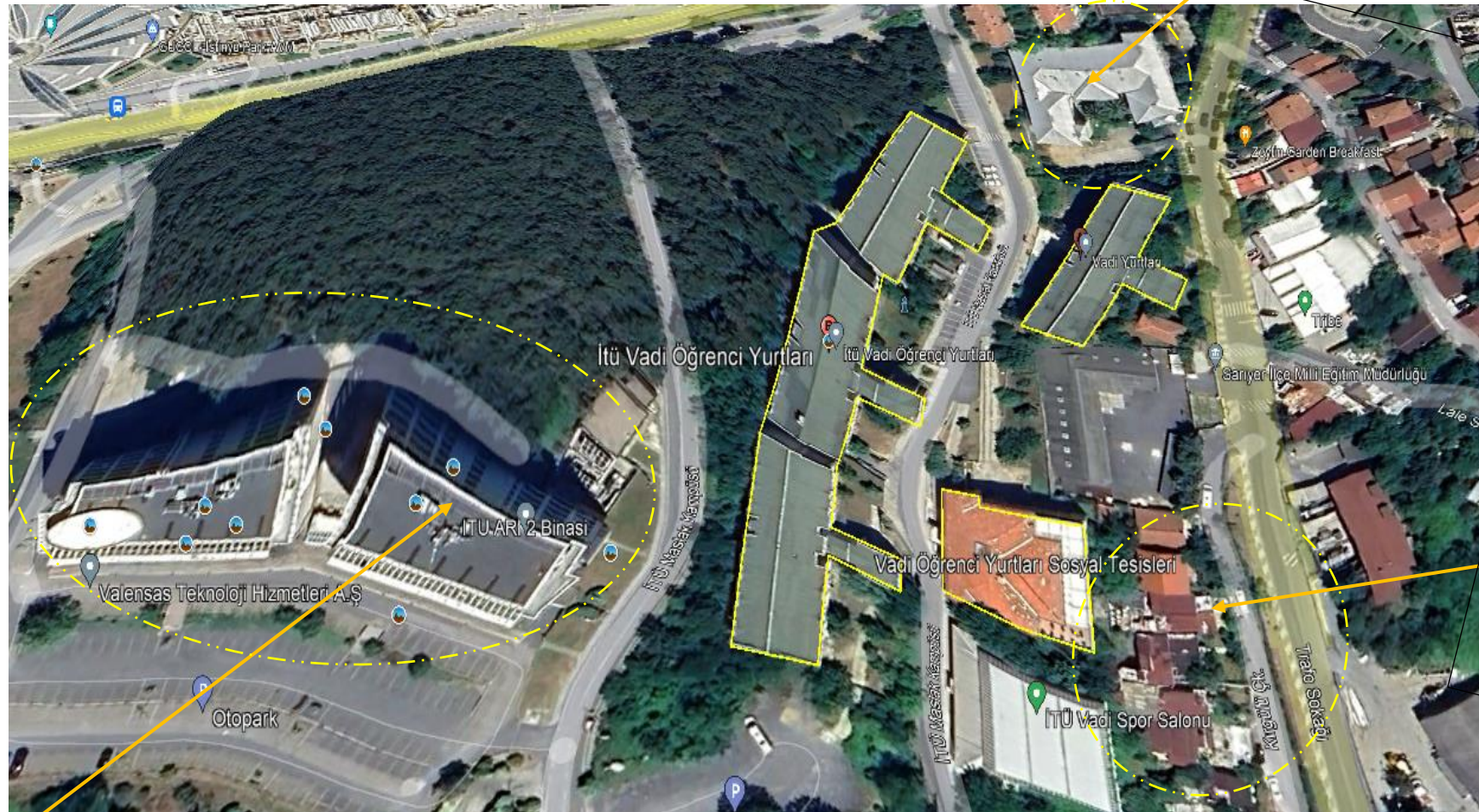
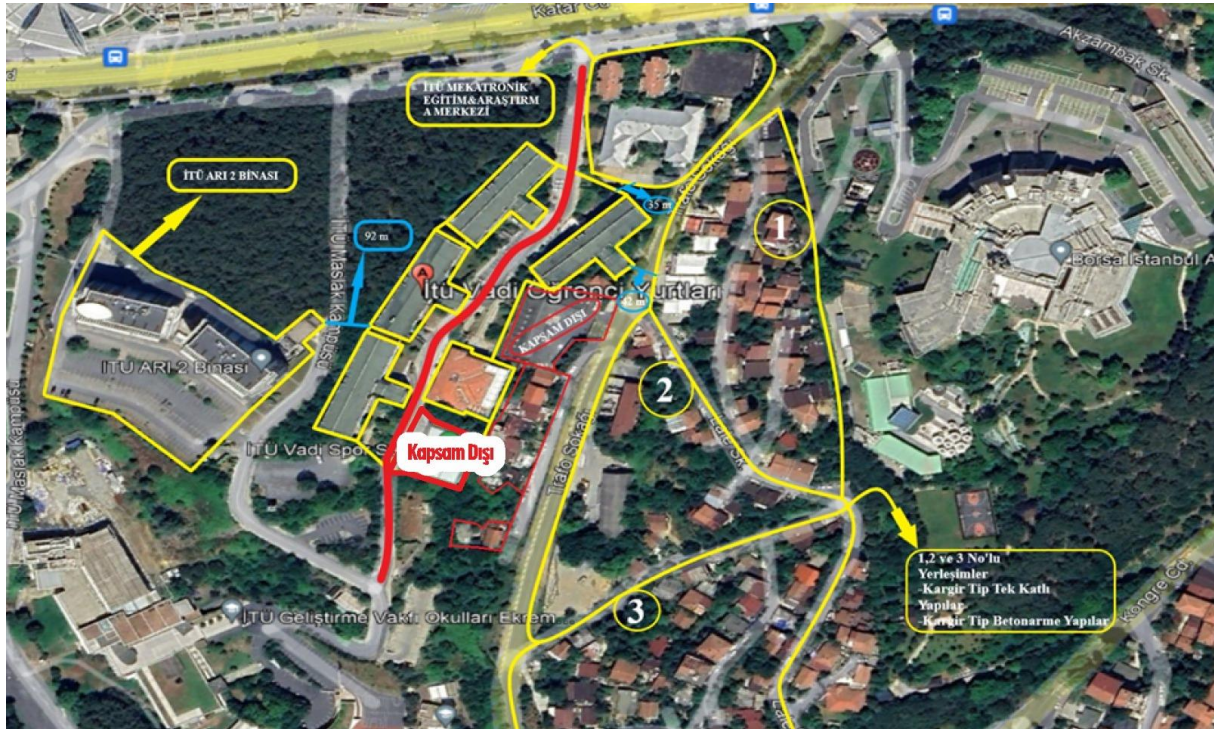
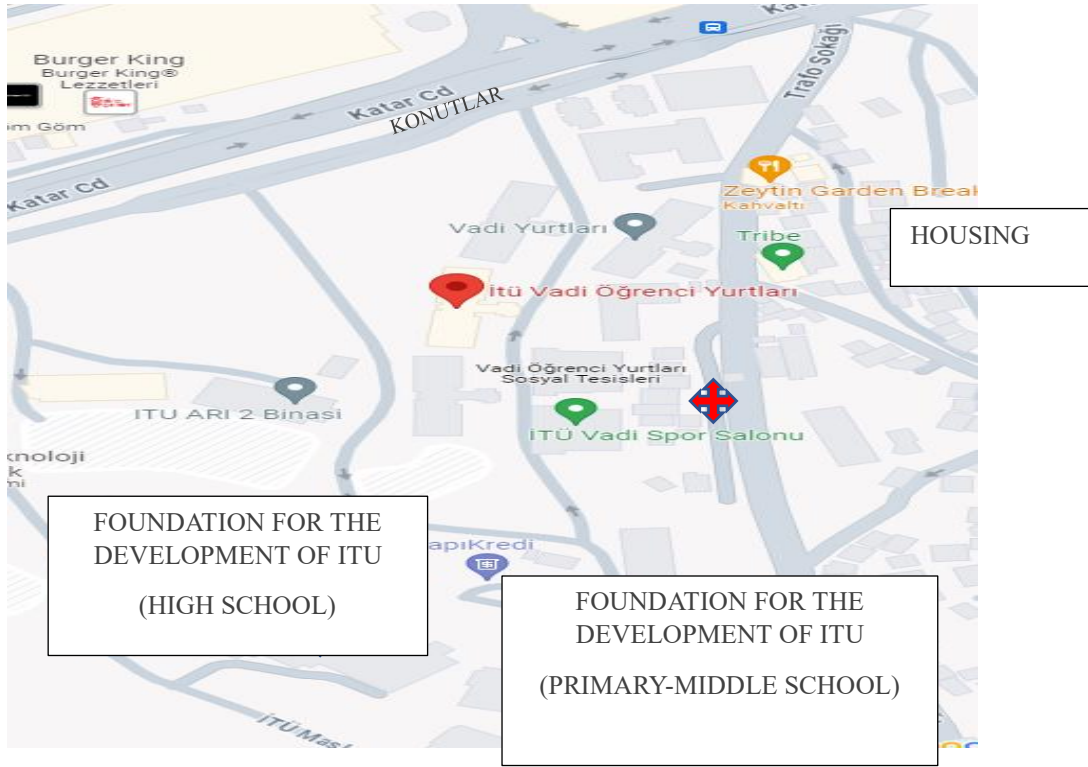


Figure 5: APPROACH DISTANCES AND MAJOR IMPACT AREA OF THE BUILDINGS INCLUDED IN THE SCOPE OF THE PROJECT

ITU TECHNOLIS



**Figure 6: MAP AND SATELLITE IMAGE SHOWING THE PROJECT AREA AND ITS SURROUNDINGS**

Photographs of the buildings within the scope of the project are given in Annex I.

## 2. Compliance with Legal Framework and World Bank Environmental and Social Framework (ESF)

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### 2.1 National Regulation

The ESMP has been primarily prepared in accordance with the legislation of the Republic of Turkey. The fundamental framework of Turkey's environmental legislation is the Environmental Law (Law No. 2872), published in the Official Gazette on August 11, 1983, and most recently revised in the Official Gazette No. 32058 dated December 29, 2022, regarding administrative fines. This law is supported by regulations. Below are the regulations that are primarily utilized or will be utilized for the evaluation and prevention of environmental impacts within the scope of this project.

1. Waste Management Regulation was published in the Official Gazette dated 2 April 2015 and numbered 29314.
2. Regulation on the Control of Packaging Wastes was published in the Official Gazette dated 26 June 2021 and numbered 31523.
3. Regulation on the Control of Excavation Soil, Construction and Demolition Wastes was published in the Official Gazette dated 18.03.2004 and numbered 25406, and an amendment was made in the Official Gazette numbered 31623 dated 09 October 2021.
4. Air Quality Assessment and Management Regulation was published in the Official Gazette dated 06 June 2008 and numbered 26898.
5. Regulation on the Prevention of Risks of Exposure to Biological Agents was published in the Official Gazette dated 15 June 2013 and numbered 28678.
6. Zero Waste Regulation was published in the Official Gazette No. 30829 dated 12 July 2019 and an amendment was made in the Official Gazette No. 31623 dated 09 October 2021.
7. Regulation on Control of Soil Pollution and Contaminated Sites by Point Sources was published in the Official Gazette No. 27605 dated 8 June 2010 and was last revised in the Official Gazette No. 28704 dated 11 July 2013.
8. Water Pollution Control Regulation was published in the Official Gazette dated 31 December 2004 and numbered 25687, and was last amended in the Official Gazette dated 12 May 2023 and numbered 32188.
9. Environmental Noise Control Regulation was published in the Official Gazette No. 32029 dated 30 November 2022.
10. The Regulation on Noise Emission in the Environment Created by Equipment Used in Open Areas was published in the Official Gazette No. 26392 dated 30 December 2006 and an amendment was made in the Official Gazette No. 30088 dated 06 June 2017.

Within the scope of the project, activities related to Occupational Health and Safety, taking into account the primary impacts, will be carried out in compliance with the legislation, including the Labor Law No. 4857 published in the Official Gazette dated June 10, 2003, with issue number 25134, and the Occupational Health and Safety Law No. 6331 Published in the Official Gazette dated June 30, 2012, with issue number 6331, along with related regulations. Below are the regulations that will be primarily utilized.

1. The Regulation on Health and Safety Measures in Working with Asbestos was published in the Official Gazette No. 28539 dated 25 January 2013 and an amendment was made in the Official Gazette No. 28884 dated 16 January 2014,
2. Manual Handling Regulation was published in the Official Gazette No. 28717 dated 24 July 2013.
3. Regulation on Occupational Health and Safety in Temporary or Fixed-Term Works was published in the Official Gazette No. 28744 dated 23 August 2013.

4. Regulation on Health and Safety Measures in Working with Chemical Substances was published in the Official Gazette No. 28733 dated 12 August 2013.
5. Regulation on the Use of Personal Protective Equipment in Workplaces was published in the Official Gazette dated 02 July 2013 and numbered 28695.
6. Health and Safety Signs Regulation was published in the Official Gazette No. 28762 dated 11 September 2013.
7. The Regulation on the Vocational Training of Those to be Employed in Hazardous and Very Hazardous Class Jobs was published in the Official Gazette dated 13 July 2013 and numbered 28706, and an amendment was made in the Official Gazette dated 11 May 2017 and numbered 30063.
8. Dust Fighting Regulation was published in the Official Gazette dated 5 November 2013 and numbered 28812.
9. Regulation on Occupational Health and Safety in Construction Works was published in the Official Gazette No. 28786 dated 5 October 2013 and an amendment was made in the Official Gazette No. 30642 dated 31 December 2018.
10. Regulation on the Protection of Employees from Noise-Related Risks was published in the Official Gazette No. 28721 dated 28 July 2013.
11. The Regulation on the Procedures and Principles of Occupational Health and Safety Training of Employees was published in the Official Gazette No. 28648 dated 15 May 2013 and an amendment was made in the Official Gazette No. 30430 dated 24 May 2018.
12. The Regulation on Health and Safety Conditions in the Use of Work Equipment was published in the Official Gazette No. 28628 dated 25 April 2013 and an amendment was made in the Official Gazette No. 31754 dated 18 February 2022.
13. The Regulation on the Duties, Powers, Responsibilities and Training of Occupational Safety Experts was published in the Official Gazette dated 29 December 2012 and numbered 28512, and an amendment was made in the Official Gazette dated 6 July 2021 and numbered 31533.
14. Regulation on Occupational Hygiene Measurement, Test and Analysis Laboratories was published in the Official Gazette dated 24 January 2017 and numbered 29958.
15. Occupational Health and Safety Services Regulation was published in the Official Gazette No. 28512 dated 29 December 2012 and an amendment was made in the Official Gazette No. 31533 dated 6 July 2021.
16. Occupational Health and Safety Risk Assessment Regulation was published in the Official Gazette No. 28512 dated 29 December 2012.
17. The Regulation on Emergency Situations in Workplaces was published in the Official Gazette No. 28681 dated 18 June 2013 and an amendment was made in the Official Gazette No. 31615 dated 1 October 2021.
18. The Regulation on Suspension of Work in Workplaces was published in the Official Gazette No. 28603 dated 30 March 2013 and an amendment was made in the Official Gazette No. 29621 dated 11 February 2016.
19. The Regulation on the Duties, Powers, Responsibilities and Training of Workplace Physicians and Other Health Personnel was published in the Official Gazette dated 20 July 2013 and numbered 28713, and an amendment was made in the Official Gazette dated 6 July 2021 and numbered 31533.
20. Regulation on Health and Safety Measures in Working with Screened Vehicles was published in the Official Gazette No. 28620 dated 16 April 2013.
21. Regulation on the Protection of Employees from Vibration-Related Risks was published in the Official Gazette No. 28743 dated 22 August 2013.
22. Regulation on Supporting Occupational Health and Safety Services was published in the Official Gazette No. 28861 dated 24 December 2013.
23. Regulation on Occupational Health and Safety Boards was published in the Official Gazette No. 28532 dated 18 January 2013.
24. Regulation on Health and Safety Measures to be Taken in Workplace Buildings and Attachments was published in the Official Gazette No. 28710 dated 17 July 2013.



25. The Regulation on the Working Conditions of Pregnant or Breastfeeding Women, Breastfeeding Rooms and Child Care Dormitories was published in the Official Gazette No. 28737 dated 16 August 2013, and an amendment was made in the Official Gazette No. 30881 dated 7 September 2019.
26. The Regulation on the Working Conditions of Female Employees in Night Shifts was published in the Official Gazette No. 28717 dated 24 July 2013 and an amendment was made in the Official Gazette No. 30159 dated 19 August 2017.

To determine the basic insurance rights during the employment of all workers, the Social Security and General Health Insurance Law No. 5510 dated June 16, 2006, will be applied.

Additionally, the Environmental Impact Assessment (EIA) Regulation, under Article 10 of the Environmental Law, was first published in the Official Gazette dated February 7, 1993, with issue number 21489, and was last revised and published in the Official Gazette dated July 29, 2022, with issue number 31907. Since the construction activities will take place in publicly-owned existing buildings, the project is not subject to the EIA Regulation.

Significant social and environmental impacts resulting from the project are likely to affect sensitive receptors located near the project area. In this context, the careful management of ESMPs and OHS activities will be sufficient to reduce environmental and social impacts.

## **2.2 International Conventions**

1. European Union Council Directive 89/391/EEC dated 12/6/1989, concerning measures to improve the health and safety of workers at work.
2. International Labour Organization (ILO) Convention No. 155, concerning Occupational Safety and Health and the Working Environment.
3. International Labour Organization (ILO) Convention No. 161 concerning Occupational Health Services.
4. International Labour Organization (ILO) Convention No. 187 concerning the Promotional Framework for Occupational Safety and Health.
5. International Labour Organization (ILO) Convention No. 167 concerning Safety and Health in Construction.
6. United Nations Framework Convention on Climate Change.
7. Paris Agreement on Climate Change.
8. Long-Range Transboundary Air Pollution Convention.

## 2.3 World Bank Environmental and Social Framework (ESF) and Standards

The project will comply with the national legislation as well as the requirements of the World Bank Environmental and Social Framework <sup>1</sup> (ESF) and the relevant Environmental, Health, and Safety (EHS) Guidelines<sup>2</sup> at all stages.

The Environmental and Social Standards (ESS) summarized in Annex II are one of the components of the World Bank Environmental and Social Framework, and they define the requirements for the project owner in terms of identifying and assessing environmental and social risks and impacts associated with projects supported by the World Bank. The applicability of the World Bank Environmental and Social Standards to the SREEPB Project is summarized in Table 3.

**Table 3: THE APPLICABILITY OF THE WORLD BANK ENVIRONMENTAL AND SOCIAL STANDARDS TO THE PROJECT.**

Environmental and Social Standards	Applicability
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	Yes
ESS2: Labor and Working Conditions	Yes
ESS3: Resource Efficiency and Pollution Prevention and Management	Yes
ESS4: Community Health and Safety	Yes
ESS5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement	No <sup>3</sup>
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	No <sup>4</sup>
ESS7: Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities	No <sup>5</sup>
ESS8: Cultural Heritage	Yes
ESS9: Financial Intermediaries	No <sup>6</sup>
ESS10: Stakeholder Engagement and Information Disclosure	Yes

<sup>1</sup> <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework>

<sup>2</sup> <https://www.ifc.org/en/insights-reports/2000/general-environmental-health-and-safety-guidelines#:~:text=The%20Environmental%2C%20Health%2C%20and%20Safety,and%20in%20IFC's%20Performance%20Standards>

<sup>3</sup> None of the activities carried out within the scope of this project will cause land acquisition, any restrictions on land use, or involuntary resettlement. All work will be conducted within existing buildings.

<sup>4</sup> There will be no interaction with natural resources and/or biodiversity elements as a result of any activity conducted within the scope of the project.

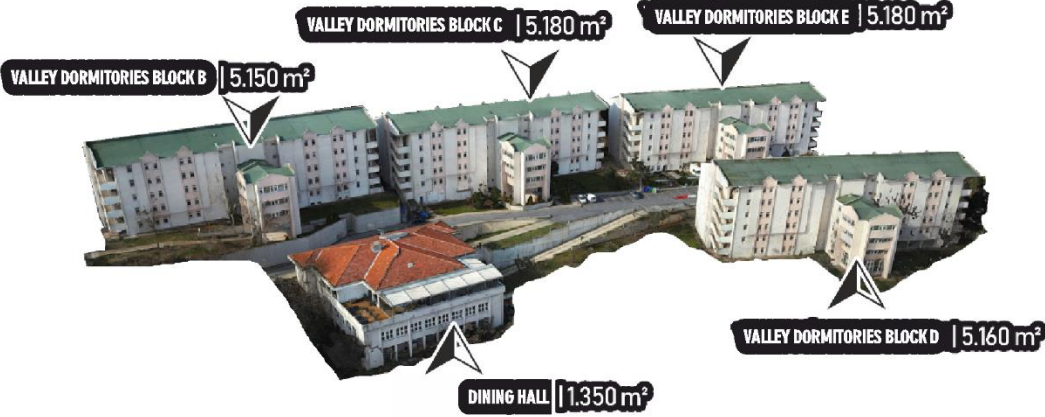

<sup>5</sup> There are no indigenous groups in Turkey that meet the definition provided in ESS7.

<sup>6</sup> Since there is no involvement of any financial intermediary institution in this project, ESS9 will not be applicable to this project.

### 3. Activities to be Conducted within the Scope of the Project

The summary technical information regarding the structural retrofitting and energy efficiency works at Istanbul Technical University Ayazaga Campus in Sarıyer/Istanbul is provided in Table 4 below. The ESMP will be accessible to all stakeholders on construction sites and the project's website ([www.kamuguclendirme.csb.gov.tr](http://www.kamuguclendirme.csb.gov.tr)) throughout the project's lifespan. Additionally, the document must be published on the project and Istanbul Technical University websites at least 10 days before the stakeholders' information meeting to allow them to review sufficient information about the project. The Contractor will employ a full-time occupational health and safety (OHS) expert and an environmental expert (including social issues). The Construction Supervision Consultant firm will employ an environmental expert, a social expert, and an OHS expert. The Consultant will be responsible for recording and responding to queries and opinions on environmental, social, and OHS issues from stakeholders, including the Contractor and Ministry's Project Implementation Unit.

**Table 4: SUMMARY INFORMATION ABOUT THE ACTIVITIES TO BE CONDUCTED**

<b>FIELDWORK</b>	
<p>DEFINITION OF THE GEOGRAPHICAL, PHYSICAL, BIOLOGICAL, GEOLOGICAL, HYDROGRAPHIC, AND SOCIO-ECONOMIC CONTEXT</p>	 <p><b>Figure 7: PHOTOS OF THE BUILDINGS INCLUDED IN THE PROJECT</b></p>  <p><b>Figure 8: DORMITORY BUILDING (BLOCK B, C, E) IMAGE</b></p>



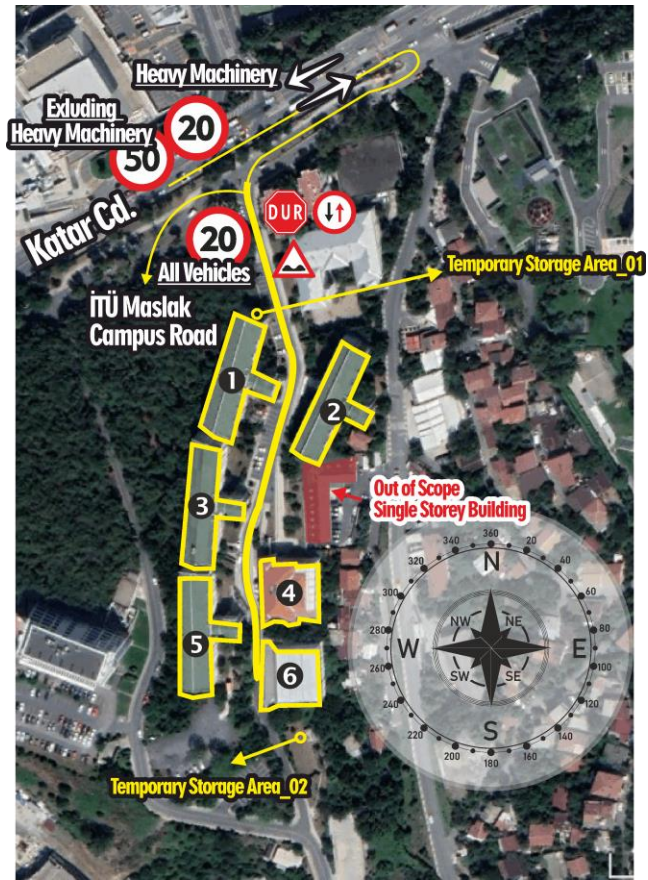
**Figure 9: DINING HALL IMAGE**

It is expected that the soil around the buildings will be affected by construction activities during the implementation of the project activities (such as scaffolding installation, painting, exterior facade cladding, etc.). Necessary precautions will be taken to prevent hazardous chemicals from contaminating the soil during the work to be carried out in this area. The measures to be taken to manage the possible environmental and social impacts and risks of the project are presented in detail in Section 5. No problems are foreseen in transportation to the project area. All infrastructure facilities required for the works, such as electricity, water, sewerage, natural gas and internet, are available.

<p>THE LOCATIONS AND DISTANCES OF THE NEAREST SENSITIVE RECEPTORS, SUCH AS HOSPITALS, HEALTHCARE FACILITIES, PUBLIC BUILDINGS, AND HOUSES</p>	<p>The majority of the retrofitting and improvement works will take place inside the building. However, preventing the settlements close to the project area from being negatively affected by construction activities will be kept under control and managed with the mitigation measures presented in this ESMP.</p> <p>The surroundings of the activity area are shown in Figure-4 and Figure-5. Within the major impact area resulting from the seismic retrofitting and energy efficiency operations to be carried out on the Vadi Student Dormitories (B, C, D, E Block) Building and the Dining Hall, there is a single-storey building, Sports Hall, and parking lot that are excluded from the scope of the project. In addition, the slums located within the campus land near the project are expected to be affected by the construction process. Possible problems that may be encountered in waste management, such as noise, dust, vibration, and the spread of excavation waste outside the construction site, may negatively affect those working/living in the buildings in question. Detailed information on the subject and precautions to be taken are included in Section 5. In addition, the university management (there are no users because the buildings have been evacuated) will be informed at least 7 days before each stage of the construction process. The construction schedule will be kept on site, in a place where stakeholders can see it, and will be constantly updated throughout the project.</p> <ul style="list-style-type: none"> <li>• The measured distances of buildings outside the university to the buildings within the scope of the project are given below. <ul style="list-style-type: none"> <li>▪ ITU Mechatronics Education and Research Center (35 m)</li> <li>▪ Slums (14 m) used by the public for shelter purposes outside the university, although they are within the campus area.</li> <li>▪ Residential (masonry single-storey buildings) – 42 m</li> <li>▪ ITU Ari 2 Building – 92 m</li> </ul> </li> <li>• The 17 slums (approximately 60 people) near the project area, as well as the residences in the ITU Mechatronics Education and Research Center, are considered sensitive receptors. Foundation for the Development of ITU Dr. Natuk Birkan Primary and Secondary School is located 125 m away from the project area, and Foundation for the Development of ITU Schools Ekrem Elinkan High School is located 140 m away. In order to ensure that all these structures are not affected by potential environmental and social risks/effects (such as dust, noise, public health and safety, etc.) arising from project activities, preventive measures are detailed in Section 5. Sarıyer 1st Family Health Center is located 4 km away from the project site, and a fully equipped Acıbadem Maslak Hospital is approximately 3.5 km away. Considering the traffic conditions, it takes about 15 minutes to reach Acıbadem Hospital by car from the project site. This information will be taken into account during the preparation of Occupational Health and Safety (OHS) emergency action plans.</li> </ul>
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**TRAFFIC ACTION PLAN**

When looking at the activity area and its vicinity, no problems are anticipated during the transportation of materials needed for construction activities. Access roads and regulations are specified in the Traffic Action Plan. The Traffic Action Plan is included in the Occupational Health and Safety Plan prepared by the Consultant. Additionally, the Contractor will prepare the Community Safety and Traffic Management Plan before the start of construction.



**Figure 10: TRAFFIC ACTION PLAN**

**SEWAGE SYSTEM,  
 ELECTRICITY,  
 WATER  
 NETWORKS, ETC.  
 INFRASTRUCTURE  
 USED BY THE  
 PROJECT**

During the construction activities, the existing sewage, electricity, and water networks in the area will be utilized. Domestic waste will be disposed of through municipal services, and temporary storage areas will be established for other waste materials, which will then be disposed of by licensed companies. In the event of any specific infrastructure service requirements for the project (such as sewage line blockages resulting in overflow requiring septic truck services, prolonged power outages necessitating mobile generators, prolonged water shortages requiring water tanker services for dust control, etc.), the existing infrastructure facilities will be evaluated, and the necessary actions will be taken in accordance with relevant regulations.

NATIONAL LEGISLATION AND PERMITS APPLICABLE TO THE PROJECT ACTIVITY (EG. SPP INSTALLATION ETC.)	<p>The existing building permits will be used for the unlicensed electricity generation application of the SPP facility.</p> <p>The documents to be obtained for Unlicensed Electricity Generation are not limited to the following:</p> <ul style="list-style-type: none"> <li>• Documents required for the Call Letter from the Authorized Electricity Distribution Company,                     <ul style="list-style-type: none"> <li>▪ Unlicensed generation connection application form,</li> <li>▪ Non-fixed subscriber number,</li> <li>▪ Receipt showing the application fee has been deposited into the account of the relevant network operator,</li> <li>▪ Single Line Diagram showing the technical specifications of the facility to be installed,</li> <li>▪ SPP Technical Evaluation Form prepared by the Directorate General of Renewable Energy, personnel program,</li> <li>▪ Approved coordinated application diagram,</li> <li>▪ Building occupancy permit in roof-type applications,</li> </ul> </li> <li>• SPP Static Projects (Roof-Top SPP Plants) Approval</li> <li>• "Connection Opinion" and "Connection Agreement Call Letter" to be obtained from the relevant distribution company</li> <li>• System Basic Information Form</li> <li>• Technical project and calculations</li> <li>• Municipality Compliance Letter for SPP (According to the Zoning Regulation Legislation) Within the scope of the "Regulation on Unlicensed Electricity Production in the Electricity Market", the online application to the authorized energy distribution company for photovoltaic panel installation is in the process of being initiated by the Consultant.</li> </ul>
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**STAKEHOLDER ENGAGEMENT PROCESS**

STAKEHOLDER ENGAGEMENT PROCESS	<p>The first stakeholder engagement meeting regarding feasibility studies (determination of the need for structural reinforcement, energy feasibility studies) was held in person on March 7, 2023. During this meeting, general information about the technical details, purpose/objectives, and stages of the project was provided (see Annex VI).</p> <p>A stakeholder information meeting was held on 05.02.2024 in order to provide information on the technical, social and environmental details of the project by the relevant experts, to answer all kinds of questions of the participants about the project and to receive their opinions before the implementation of the prepared and approved projects. At the meeting, detailed information on the retrofitting and energy efficiency renovations to be carried out in ITU Ayazaga Campus Vadi Dormitories was given and the envisaged environmental and social impacts were conveyed. The meeting was attended by the management and technical units of the beneficiary institution, experts of the consultant firm and PIU experts. A total of 9 people (2 women, 7 men) attended the meeting in person; Branch Manager, Environmental Expert, 2 Social Experts, OHS Expert, 3 Civil Engineers, Project Implementation Unit Construction Expert and Project Assistant participated online (5 women, 5 men). Since the meeting date coincided with the semester break of the universities, student participation could not be ensured. Detailed information is given in Annex VII.</p> <p>Prior to the information meeting, this ESMP was published on the website of the Ministry of Environment, Urbanisation and Climate Change for 12 days and made available to stakeholders. The ESMP will be available to all stakeholders throughout the life of the Project, both on the relevant website and at the construction sites. In addition, a hard copy of this ESMP was also made available to stakeholders at all buildings involved in the project for 12 days.</p> <p>Details about the Grievance Mechanism established for the project are provided in Section 4.</p>
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<b>ISSUES AND CONCERNS RAISED BY BUILDING USERS</b>	<p>During the information meeting held on March 7, 2023, regarding feasibility studies, building users were informed about the structural retrofitting and energy efficiency renovation process. They were asked if they had any concerns, opinions, suggestions, or questions related to these potential activities. Up until the date of preparing this report, there has been no feedback from any stakeholder, either written or verbal, or through the project Grievance Mechanism, regarding the project.</p> <p>Any concerns of students and other building users regarding these studies were raised at the stakeholder engagement meetings organised for the ESMP and recorded in the minutes of the stakeholder engagement meeting and the opinions/suggestions and concerns of the stakeholders are included in Annex VII. This document has been revised in the light of additional data obtained as a result of this meeting.</p>
<b>INSTITUTIONAL CAPACITY DEVELOPMENT</b>	
<b>TRAINING</b>	<p>Under the project, it is expected that the contractor's corporate capacity will improve as a result of the training provided by the Consultant to the Contractor's personnel. These training sessions are listed below:</p> <ul style="list-style-type: none"> <li>• Environmental and Social Impacts</li> <li>• Waste Management</li> <li>• Response to Environmental Emergencies</li> <li>• Energy Efficiency</li> <li>• Stakeholder Engagement/Information Activities</li> <li>• Grievance Mechanism (GM)</li> <li>• Gender Equality/Gender-Based Violence/Sexual Exploitation/Sexual Abuse/Sexual Harassment</li> <li>• Code of Conduct</li> <li>• Preservation of Historical Heritage</li> <li>• Implementation and Monitoring of the OHS Plan</li> <li>• Tagging and Lockout Training</li> <li>• Work Permit System Training</li> </ul>



## 4. Stakeholder Engagement and Grievance Mechanism (GM)

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Stakeholder Engagement is an inclusive process conducted throughout the project lifespan, supporting the establishment of strong, constructive, and responsive working relationships essential for the successful management of environmental and social impacts and risks of the project. Stakeholder Engagement Meeting was organized on March 7, 2023, with a total of 5 participants, including 2 women and 3 men, to provide general information about the reasons, objectives, and stages of the project (Annex VI), preceding the field assessment (identification of structural reinforcement needs, energy audit studies).

This project-specific ESMP will be published on the SREEPB Project website (<https://kamuguclendirme.csb.gov.tr/>) throughout the project lifespan to ensure that all stakeholders are informed about how the project will be conducted in the field and to receive objections and suggestions if any, and was posted on January 25, 2024, at the ITU Ayazaga Campus Vadi Dormitories included in the sub-project. Before implementing the approved projects, relevant experts provided information on the technical, social, and environmental details of the project, answered any questions from participants, and collected their opinions during another Stakeholder Engagement Meeting held on February 5, 2024. The meeting was attended by the contractor, beneficiary institution management and technical units, consultant firm employees, and relevant experts from the Project Implementation Unit, with a total of 19 participants, including 7 women and 12 men. Details of the Stakeholder Engagement Meeting are presented in Annex VII.

Additionally, the Consultant prepared promotional materials (brochures, posters, etc.) for information purposes and ensured their distribution to stakeholders.

The Grievance Mechanism, which is an essential element of Stakeholder Engagement for the project, provides effective access to a procedure for those affected or concerned parties to raise grievances. Grievances may indicate stakeholder concerns and, if not identified and resolved, can escalate. Identifying and responding to grievances supports the development of positive relationships among project staff, local communities, and other stakeholders.

In order to receive, evaluate and resolve complaints/opinions/suggestions that may arise during the activities to be carried out in public buildings within the scope of the SREEPB Project, the PIU of the Ministry of Environment, Urbanization and Climate Change has developed a transparent and comprehensive GM specifically for the SREEPB Project before the project implementation begins. This mechanism will assist all relevant stakeholders in submitting their grievances/views/suggestions regarding the activities to the relevant individuals and institutions and strengthen stakeholder participation in the project. Moreover, this mechanism ensures that all project staff (PIU, Consultant, Contractor) can submit complaints/suggestions/views to the Ministry and the World Bank anonymously or openly. The responsibilities of the Contractor, Consultant, and PIU are detailed in the Stakeholder Engagement Framework document of the Project ([https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894\\_paydas-katilim-cercevesi-mayis-final\\_20210521122305.pdf](https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894_paydas-katilim-cercevesi-mayis-final_20210521122305.pdf)). Furthermore, all parties involved in the project are obliged to implement the Environmental and Social Management Plan, Stakeholder Engagement Framework, and Labor Management Procedures of the Project.

Within the scope of the SREEPB Project, grievances will be addressed at multiple levels:

Grievances within the SREEPB Project will be addressed at multiple levels:

- a) At the Contractor level;
- b) At the Consultant level;

- c) At the Provincial Directorates of the Ministry of Environment, Urbanization, and Climate Change;  
d) At the national level, at the Provincial Directorate Project Implementation Unit (PIU).

**a) Contractor Level:** Each contractor appointed to carry out construction works will be responsible for receiving, recording, and, if possible, resolving grievances /concerns/opinions/suggestions expressed by any stakeholder (*building management, building users, visitors, local communities or beneficiaries, project staff, etc.*) in accordance with the Grievance Mechanism Procedure. The contractor will ensure that all personnel involved in the project are aware that they can use the Grievance Mechanism (GM) and that grievances from staff will not be an obstacle to renewing their employment contract in the future.

The steps for transmitting grievances/opinions/suggestions from employees are detailed under the "Grievance Mechanism for Employees" heading in the SREEPB Project Workforce Management Procedures. All employees can use this mechanism openly or anonymously.

If the Contractor cannot resolve grievances/concerns/opinions/suggestions related to construction works carried out within the scope of the SREEPB Project, they are obliged to forward these applications to the relevant person/organizations in accordance with the Grievance Mechanism Procedure of the project.

Contractors will also report the records they keep, including resolved and unresolved grievances/concerns/opinions/suggestions, to the Consultant on a weekly basis. The contractor is obliged to resolve grievances within 15 calendar days at the latest.

**b) Consultant Level:** Concerns/views/recommendations that cannot be addressed at the contractor level will be handled by the social specialist of the Consultant Firm, who serves as the Construction Controller. The Project Manager, following the Grievance Mechanism Procedure, will prepare a situation report, reminding the contractor of their responsibilities and ensuring that necessary corrective actions are taken to resolve the issue.

The Consultant will assure all personnel involved in the project that they can use the GM, and that using it will not affect the renewal of their contracts in the future. If the Project Manager cannot resolve grievances /concerns/ opinions /recommendations, they are obliged to refer them to the Ministry of Environment, Urbanization, and Climate Change. The Consultant firm is responsible for resolving within a maximum of 15 calendar days.

The Consultant will also report both direct grievances/concerns/views/recommendations they receive and those conveyed by the contractor to the Ministry of Environment, Urbanization, and Climate Change on a weekly basis.

**c) MoEUCC Provincial Directorates Level:** To the extent possible, the Provincial Directorate of Environment, Urbanization, and Climate Change will be responsible for grievances /concerns/views/recommendations received regarding activities carried out within the scope of the SREEPB Project.

Provincial directorates will also promptly forward all grievances / concerns / opinions / recommendations received, whether or not they resolve them, to the Authority.

**d) MoEUCC Level (PIU):** Within the scope of the SREEPB Project, MoEUCC is responsible for collecting, recording, and resolving all grievances/concerns/views/recommendations expressed by stakeholders through the levels mentioned above. MoEUCC is responsible for resolving the collected grievances/concerns/views/recommendations within 15 calendar days and informing the complainant about the results. However, in cases requiring detailed investigation, this period can be extended to 30 calendar days.

For grievances regarding gender-based violence and sexual exploitation and harassment, it is recommended to use the web-based Grievance Mechanism provided in Annex III for privacy reasons. In order to ensure confidentiality, an authorized personnel will have access to this web-based Grievance Mechanism.

In addition to the Grievance Mechanisms at different levels defined above, throughout the life of the Project, stakeholders will also be able to use the national Grievance Mechanism channels detailed below. The channels for communicating grievances and suggestions to the Administration, especially the national Grievance Mechanism such as the Presidential Communication Center of the Republic of Türkiye (CİMER), are given below:

**Table 4: CİMER COMMUNICATION CHANNELS**

<b>Website</b>	<a href="https://www.cimer.gov.tr">https://www.cimer.gov.tr</a> <a href="https://giris.turkiye.gov.tr/">https://giris.turkiye.gov.tr/</a>
<b>Call Center</b>	Alo 150
<b>Mailing Address:</b>	T.C. Cumhurbaşkanlığı Külliyesi 06560 Beştepe – Ankara
<b>Phone</b>	+90 312 590 2000
<b>Fax</b>	+90 312 473 6494

**Table 5: GM COMMUNICATION CHANNELS**

Call Center	: ALO 181
Phone	: 0312 586 4858
E-mail	: <a href="mailto:yigmkadev@csb.gov.tr">yigmkadev@csb.gov.tr</a>
Grievance	: <a href="https://kadevoneri.csb.gov.tr/oneri.jsp">https://kadevoneri.csb.gov.tr/oneri.jsp</a>   Suggestion and grievance boxes installed in buildings

The communication channels for the GM include wall posters in all buildings (posted on walls where suggestion and grievance boxes are located) and the distribution of project brochures to raise awareness. Additionally, all project personnel are responsible for informing stakeholders in their surroundings about the suggestion and grievance mechanisms. They will be provided with information on this matter before the project commences. Further details on this issue are explained in the Stakeholder Engagement Framework (SEF) ([https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894\\_paydas-katilim-cercevesi-mayis-final\\_20210521122305.pdf](https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894_paydas-katilim-cercevesi-mayis-final_20210521122305.pdf)).

The Construction Contractor is responsible for receiving, recording, and resolving, grievances/concerns/opinions/recommendations during the renovation of public buildings. Every contractor appointed to carry out construction work will establish a system to receive and record, opinions, and suggestions related to construction activities from building management, employees, visitors, and beneficiaries. The contractor will record grievances, opinions, and suggestions using the Grievance and Suggestion Form and the Grievance Closeout Form provided in Annexes IV and V. Verbal, opinions, and suggestions will be recorded by the responsible personnel of the contractor by filling out the Grievance and Suggestion Form. The contractor is obliged to send the recorded grievances to the Project Manager every week. The Project Manager is responsible for reporting the received, suggestions, and requests to the MoEUCC on a weekly basis.

Records related to grievances, opinions, and suggestions will be regularly shared by MoEUCC with the World Bank (WB). Additionally, individuals or communities who believe they have been adversely affected by projects supported by the WB can submit their grievances through the project-level Grievance Mechanism (GM) available or directly to MoEUCC, or through the WB's Grievance Redress Service (GRS) at (<https://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>).

Stakeholders affected by the project can also submit their grievances to the WB Inspection Panel. This panel determines whether individuals or communities who file grievances have been or could be harmed as a result of a violation of one or more of the WB's performance criteria. The Panel can directly communicate its concerns about received grievances to the WB, at which point the WB has the opportunity to respond to the grievances. For information on how to submit grievances to the WB Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

## 5. Environmental and Social Risks & Impacts and Precautions to be Taken

**Table 6 LIST OF ENVIRONMENTAL & SOCIAL EFFECTS AND MEASURES TO BE TAKEN**

IMPLEMENTATION / CONSTRUCTION PHASE	RISK & IMPACTS	MEASURES	RESPONSIBILITY
<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>a) OHS</b></p> <p>Possible adverse safety and health effects for workers, local population and employees due to:</p> <ul style="list-style-type: none"> <li>- Possible injuries that employees may be exposed to due to reasons such as working at height, working with hazardous materials, electrical tools;</li> <li>- National and defined international occupational health and safety in the workplace -Failure to comply with national and defined international occupational health and safety requirements in the workplace;</li> </ul>	<ul style="list-style-type: none"> <li>• Local construction and environmental inspection authorities and communities will be informed about the planned activities.</li> <li>• The public will be informed through stakeholder participation, in the media, and/or in public places through appropriate notifications.</li> <li>• All necessary legal permits for construction and/or improvement will be obtained.</li> <li>• All construction activities to be implemented; Regular site inspections will be carried out by the Project Implementation Unit (PIU) and the Consultant to ensure and monitor that the project is carried out in accordance with national laws and regulations, including the regulation on fire protection of buildings, and the requirements of the World Bank standards.</li> <li>• Detailed information and analyses regarding occupational health and safety are included in the Occupational Health and Safety Plan prepared for the same campus.</li> <li>• In regions where underground natural gas pipeline facilities are located, Phase II of the Projects. The Natural Gas Provider Company is responsible for carrying out the necessary work before the Phase 1 (Construction Phase) begins. The Natural Gas Pipeline process will be completely ready, all controls and tests will be carried out by the Service Provider Local Distribution Company before the Site Transfer takes place in order to create the necessary environment and will be delivered as specified in the projects. The Property Owner must apply for the construction of the facilities in question in accordance with the relevant legislation. For this reason, neither the Consultant nor the Contractor will intervene in these natural gas pipelines.)</li> </ul>	<p>Project Implementation Unit (PIU) Consultant</p>

		<ul style="list-style-type: none"> <li>• The Contractor shall immediately inform the MoEUCC in the event of a significant incident. MoEUCC will report all types of significant incidents (such as accidents, leaks, deaths, etc.) to the World Bank within 48 hours and will submit an incident investigation report along with a corrective action plan to the World Bank within 30 business days.</li> <li>• Regular site inspections will be conducted by the PIU and the Consultant to ensure that all construction activities are carried out in compliance with national laws and regulations and the requirements of the World Bank standards.</li> <li>• Health and safety measures and environmental measures related to the restructuring of the public building will be detailed in the project-specific Waste Management Plan and Occupational Health and Safety Management Plan.</li> <li>• The Contractor company will prepare its own OHS plan for the work it will carry out, taking into account the Occupational Health and Safety (OHS) Plan prepared by the Consultant.</li> </ul>	<p>Consultant PIU Contractor</p> <hr/> <p>Consultant PIU Contractor</p>
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	<ul style="list-style-type: none"> <li>• Before construction work begins, a Risk Assessment study will be conducted for all tasks to be performed. Relevant procedures and plans, including Risk Assessment, safety procedures, training, monitoring, case investigation, and reporting, as well as Emergency Plans, will be included in Health and Safety Plans (Health and Safety Plans, prepared by audit consultants and developed by contractors by adding site-specific risk assessments, procedures, instructions), (including Asbestos Work Requirements and Precautions presented in Annex-8 of the ESMF (<a href="https://webdosya.csb.gov.tr/kamuguclendirme/menu/SREEPB-p175894_csyc_final100521--mayis_20210510070430.pdf">https://webdosya.csb.gov.tr/kamuguclendirme/menu/SREEPB-p175894_csyc_final100521--mayis_20210510070430.pdf</a>)) such as the Asbestos-Containing Structure Dismantling Procedure.</li> <li>• Proper signage will be used on construction sites to inform workers of basic rules and regulations they should follow.</li> <li>• Occupational Health and Safety (OHS) training will be provided to employees, identifying potential risks related to the work site and tasks, and weekly and monthly site safety meetings will be conducted.</li> <li>• The contractor formally acknowledges that all works will be carried out in a safe and disciplined manner, designed to minimize the impact on residents and the environment.</li> <li>• The contractor will appoint personnel/responsible/experts with relevant certificates and experience for occupational health and safety.</li> <li>• The contractor will provide a safe working environment for workers and, before construction activities, will supply personal protective equipment (PPE) (such as helmets, masks, safety goggles, safety harnesses, and safety boots as needed) in accordance with international best practices and Turkish regulations.</li> <li>• An appropriate environment for workers to rest during breaks will be provided by the contractor firm, and this will be arranged and</li> </ul>	<p>Consultant Contractor</p>
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		<p>approved in consultation with building managements, taking into account the number of workers and break times.</p> <ul style="list-style-type: none"><li>• Eating places for workers will be established in areas determined by building technical units with the written permission and approval of the student dormitory management.</li><li>• Changing areas for workers (lockable) will be provided within the buildings with the written permission and approval of the student dormitory management. These areas will be determined by building technical teams, and the use of areas outside of these designated areas is strictly prohibited. Workers will be informed by the contractor firm not to keep valuable items in these areas, and the building management will not be responsible for any theft or similar incidents in these areas. Warning signs will also be posted regarding this matter.</li><li>• Toilet needs for workers will be addressed through building infrastructures with the written permission and approval of the student dormitory management. In case the existing infrastructure cannot be used, WC containers with all necessary hygiene materials will be provided by the contractor. However,<ul style="list-style-type: none"><li>▪ Employees will be able to use the toilets allowed/allocated for them in the building. The contractor will inform their employees about which toilets are allowed/allocated based on the number of employees. Monitoring and control regarding this restriction will be the responsibility of the contractor.</li><li>▪ The contractor will educate their employees on the proper use of these toilets in compliance with hygiene rules, and if any misuse is detected, the cleaning responsibility will be on the contractor.</li><li>▪ The contractor will provide all necessary materials for hygiene that employees may need.</li></ul></li></ul>	
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		<ul style="list-style-type: none"><li>• The contractor will provide work uniforms that display the project name to easily distinguish the employees.</li><li>• Employees are strictly prohibited from engaging in discussions with building technical units and campus users for any reason. In case of any problems related to individual or activities, employees will immediately report three situation to their supervisor (Responsible supervisor's contact information will be provided to all employees by the contractor). The contractor will document and report such situations to the consultant. Any decision/action related to this process will be carried out in accordance with the knowledge and approval of the building management.</li><li>• If necessary, approval from the building management will be obtained for night work. All activities will be conducted in accordance with both the Occupational Health and Safety Law (Official Gazette dated June 30, 2012, and numbered 28339) and the relevant regulations, as well as the Environmental, Health, and Safety (EHS) Guidelines of the World Bank Group (WBG).</li><li>• In the event of any epidemic or pandemic/infectious disease, guidance, guidelines, and recommendations provided by the Ministry of Health, Ministry of Labor and Social Security, and the World Health Organization will be followed. All relevant measures for occupational health and safety for both employees and workplaces will be implemented.</li><li>• Entry of third parties without a specific role in the construction site will be prevented.</li><li>• The names of personnel who will be on duty at the construction site, along with the necessary training certificates, will be submitted to the Consultant in a list. Employees with appropriate training and personal protective equipment will enter the construction site with identification cards.</li></ul>	
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		<ul style="list-style-type: none"><li>• Individuals under the age of 18 will not be allowed to enter the construction site.</li><li>• Smoking areas on the construction site will be determined by the contractor.</li><li>• Eating, drinking, break/rest, toilet, and sink facilities will be provided in designated areas within the building where the work is being carried out, as indicated by technical units. This information will be communicated to the student dormitory managements. Workers involved in the project will not leave the allocated areas.</li><li>• Hygiene materials necessary for workers will be provided by the contractor. The existing sewer infrastructure in the region will be used for wastewater.</li><li>• Packaged water (plastic bottle, glass bottle, etc.) will be provided for workers as drinking water.</li><li>• Clean potable water will be provided through the existing building's infrastructure. Consumption of this water as drinking water will be prohibited . The contractor will provide personal protective equipment (PPE) in compliance with Turkish regulations, including international best practices and health and safety measures related to pandemics provided by the Ministry of Health and the Ministry of Labor and Social Security. This includes monitoring and controlling the use of PPE (<i>such as always wearing helmets, using respiratory protective equipment when necessary, protective eyewear, full-body safety harnesses, and foot protection, etc.</i>).</li><li>• PPE and working clothes will be stored separately from employees' personal clothing, and closed dressing rooms will be established within the building for this purpose.</li><li>• In case of work accidents resulting in lost workdays, accident investigations will be conducted and reported.</li></ul>	
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		<ul style="list-style-type: none"><li>• Workers who will work at heights (such as façade insulation, roof insulation, roof-mounted PV applications, etc.) will receive theoretical and practical training on working at heights. The health report of individuals working at heights will indicate their suitability for working at heights, as determined by the workplace physician. Before work commences, a plan for working at heights will be prepared, and work permits will be obtained. Work at heights will be carried out under the supervision of competent personnel and occupational safety experts. Fall protection systems and working at height equipment will be selected in accordance with relevant regulations, and their maintenance, inspection, and repair will be performed by trained personnel.</li><li>• All work equipment to be used will undergo regular inspections and maintenance as required, their compliance with standards and CE markings will be verified, and relevant records will be maintained. Otherwise, the equipment will not be allowed into the work area. Employees responsible for using the equipment will receive job-specific training.</li><li>• Maintenance forms for field equipment will be provided, regular maintenance and repairs will be carried out, and individuals responsible for maintenance and repairs will be designated.</li><li>• When new equipment and innovations are introduced in the work process, risk assessments will be updated, and all personnel will be informed and trained on any changes.</li><li>• Prior to entering the site, all lifting equipment, pressure vessels, and boilers will undergo periodic inspections, and access approval will be granted after inspection by the consultant.</li><li>• All machinery, equipment (including scaffolding), and hand tools entering the site will be checked for compliance with TSE standards and CE certification. Entry approval will be granted by the consultant after verification.</li></ul>	
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		<ul style="list-style-type: none"><li>• Planning for material procurement, shipping processes, and storage areas will be ensured.</li><li>• For every ten (10) workers working in the same building, the contractor will have one (1) employee with a First Aid Certificate, and if the number of workers is less than 10, at least one (1) first aider will be present. Each team working in different buildings will be evaluated separately.</li><li>• storage areas for materials will be established. Chemical substances will be brought to the site after checking their safety data sheets.</li><li>• Workers without vocational competency certificates will not be employed.</li><li>• All employees will start work only after completing basic OHS training and orientation. Training will be updated as required by regulations.</li><li>• Renovation areas inside and outside the buildings will be marked with warning tapes. Sufficient warning signs will be installed to restrict access to these areas.</li><li>• Visitors will not be allowed to approach renovation areas. However, in necessary cases, building technical staff with expertise will be allowed to enter these areas under the supervision of authorized employees to monitor the process, take necessary safety measures, and use appropriate personal protective equipment (PPE). Training documents will be prepared for those entering the site under the supervision of authorized employees, and they will receive training before entering the site.</li><li>• A construction method and risk assessment will be conducted for every activity to be carried out in the field.</li><li>• An work permit system will be established for hazardous activities such as night work, working at heights, excavation work, welding work, etc.</li></ul>	
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		<ul style="list-style-type: none"><li>• A lockout-tagout system will be established for work on energized lines, such as maintenance and repair work involving hazardous voltage. Employees will receive special training on this system.</li><li>• A discipline enforcement system for OHS non-compliance in the field will be established, and all employees will receive training on this matter.</li><li>• Construction activities are primarily scheduled during daylight hours. However, if night work is required, the entire work area, access paths, and hazardous areas shall be well lit.</li><li>• Procedures will be prepared for situations that may occur during construction activities and require emergency response, such as fires, earthquakes, chemical spills, etc., to ensure control of public and environmental health. These procedures will be shared with all employees.</li><li>• If there will be a disruption in electrical, water, or natural gas supply, whether short or long-term, due to construction activities, the necessary security measures will be taken, and building users will be informed of the interruption well in advance.</li><li>• Employee health screenings, entry documents (personnel files), training documents, PPE delivery records, approved logbooks, and all other documents and records required by OHS regulations will be kept in the workplace. All these documents will be ready for presentation during inspections by the Consultant and the Ministry.</li><li>• An organizational chart outlining roles, responsibilities, and contact information for OHS will be created under the OHS heading.</li><li>• In case of changes to public building entrances during construction, appropriate structures for disabled users will be provided.</li><li>• The OHS Plan to be prepared will also address public health, and a person and position responsible for communication with building users and the local community will be defined in the plan.</li></ul>	
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		<ul style="list-style-type: none"><li>• Records of all activities and incidents (<i>meetings, inspections, supervision, training, accidents, fires, etc.</i>) conducted during the construction phases will be kept.</li><li>• In accordance with the SREEPB Project Labor Management Procedure and covering all contractors and subcontractors:</li><li>• The contractor and all subcontractors will create a written and signed social policy/commitment statement, confirming that they will not engage in forced labor, child labor, or employ uninsured workers. They will also commit not to discriminate among workers based on age, gender, religion, language, race, etc., and will refrain from the use of force, abuse, bullying, insults, and humiliation. This document will emphasize that all contractor employees should pay attention to these aspects in their relationships and communication with each other.</li><li>• Measures will be taken to prevent the spread of infectious diseases (including sexually transmitted diseases and infections such as HIV) and non-communicable diseases arising from the performance of construction works. In this context, particular attention will be given to the awareness that different groups of the community, especially vulnerable and fragile groups, may be at varying levels of risk. Preventive and mitigating measures will be implemented to address the spread of infectious diseases that may arise from temporary or permanent labor mobility associated with the contract.</li></ul>	
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<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>b) OHS</b></p> <p>Possible adverse health effects on workers, facility users, children, and the general public due to asbestos fiber and dust emissions during the removal, transportation, and final disposal of asbestos layers</p>	<ul style="list-style-type: none"> <li>• The project site will be illuminated throughout the night.</li> <li>• No waste will be disposed of in the surrounding area, and this area will be kept clean. Waste must be collected and removed from the construction site.</li> <li>• Any broken glass during the process will be immediately cleaned.</li> <li>• Work areas will be separated from inhabited areas of the building using physical barriers.</li> <li>• The entire procedure to be applied regarding asbestos is included in Annex 8 of the <u>Environmental and Social Management Framework</u> document. Work will be carried out in accordance with the requirements of Annex 8 and the Regulation on Health and Safety Measures in Working with Asbestos. An addition will be made to the cleaning schedule of the building to remove the extra dust and dirt created by the demolition work;</li> <li>• Safety guidelines for the storage, transportation and distribution of hazardous materials will be followed in order to minimize the possibility of misuse, leaks and accidental human exposure.</li> <li>• Old windows and doors will be temporarily stored in a secure location designed to prevent unauthorized access.</li> <li>• Regular maintenance will be conducted on vehicles to minimize the risk of accidents due to equipment failure or early breakdowns.</li> <li>• Both training sessions and incidents (such as fatalities, lost-time accidents, leaks, fires, etc.) will be documented.</li> <li>• In the event of a significant incident, the contractor will immediately inform the MoEUCC. The MoEUCC will report any significant incident (such as accidents, leaks, fatalities, etc.) to the World Bank within 48 hours and submit an incident investigation report, along with a corrective action plan, to the World Bank within 30 working days.</li> </ul>	<p>Contractor</p>
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	<p><i>c) Safety</i></p>	<ul style="list-style-type: none"> <li>• The contractor will be responsible for the safety of all personnel and individuals within the construction site from the moment construction work commences.</li> <li>• In the event of any damage occurring during construction work, the Contractor will compensate for all damages incurred by the Beneficiary Institution, Employer, and/or third parties.</li> <li>• During the works, the safety regulations of the Ministry of Labor and Social Security of the Republic of Türkiye and the rules of the Ministry of Health will be taken into consideration. The relevant regulations will be used as a general reference during the construction.</li> <li>• The Contractor will have qualified personnel specifically responsible for safety and protection against accidents on the site. This person will be responsible for the Contractor's entire workforce and labor, as well as the Project Manager, the employer's personnel on the site, equipment, offices, and other facilities. This individual will possess the necessary qualifications for the job, have the authority to give instructions, and be capable of taking all necessary measures to prevent accidents. The Contractor will establish a dedicated team for this purpose.</li> <li>• The Contractor will take all necessary safety precautions to ensure that the materials and equipment to be used in the spaces where construction will take place are not damaged.</li> <li>• A security team consisting of an adequate number of guards will cooperate with the City Security Forces and strictly follow all rules and instructions received from them. The Contractor will have at least one night guard for the construction site.</li> <li>• The scrap parts of machinery, equipment, and systems that have been replaced will be delivered to the building management without causing any damage.</li> </ul>	<p>Contractor</p>
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		<ul style="list-style-type: none"> <li>• These machine, equipment, and system parts will be transported by the contractor to the area requested by the building management (inside the building and/or within the campus). The transportation and delivery process will be documented with a delivery report. As of the date when this report is signed by both parties, the responsibility for the scrap parts will belong to the building management.</li> </ul>	
<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>d) Waste Management</b> Various waste streams and improper waste management may lead to potential adverse environmental and health effects (improper waste management can result in direct and indirect pollution of water and soil and can affect air quality).</p>	<p><b>General Information</b></p> <ul style="list-style-type: none"> <li>• PIU and the consultant will monitor the practices regarding environmental and social impact mitigation measures specified in the Environmental and Social Management Plan through field inspections.</li> <li>• Regular site inspections will be carried out by the PIU and the Consultant to ensure and monitor that all construction activities are carried out in accordance with national laws and regulations and World Bank ESF requirements.</li> <li>• The Waste Management Plan will be prepared by the consultant as specified in Annex 9 of the Environmental and Social Management Framework.<sup>7</sup></li> <li>• Waste collection and disposal routes and sites for all waste types expected to arise from renovation, demolition and construction activities will be defined in site-specific Waste Management Plans.</li> <li>• Daily visual site inspections will be conducted by the consultant to monitor the implementation of mitigation measures.</li> </ul>	<p>PIU Consultant  Consultant</p>

<sup>7</sup> [https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/kadev-p175894\\_csyc\\_final100521--mayis\\_20210510070430.pdf](https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/kadev-p175894_csyc_final100521--mayis_20210510070430.pdf)

		<ul style="list-style-type: none"> <li>• All types of waste will be separated at the source and collected separately during construction activities. The waste will be transported to temporarily designated waste storage areas in compliance with project and regulatory requirements, as determined in consultation with the beneficiary's knowledge. (The temporary storage period is limited to 6 months.)</li> <li>• Temporary storage areas will be determined by the contractor, with permission obtained from the Gazanfer Bilge Student Dormitory Administration, and these areas will be reported to the consultant.</li> <li>• If a protocol is signed between the contractor and the beneficiary institution, the existing waste management system can be used. However, through the protocol, the contractor will be responsible for covering the costs associated with its own waste.</li> <li>• The contractor will, if possible, reuse and recycle appropriate and feasible materials (except asbestos).</li> <li>• Documents related to waste disposal and recycling will be regularly maintained and recorded. A Waste Record Information Form will be prepared for keeping these records.</li> <li>• The Ministry of Environment, Urbanization and Climate Change will ensure the disposal of hazardous wastes to licensed disposal facilities through the use of the Waste Management application on the Integrated Environmental Information System (E-CBS) in online programs</li> <li>• During construction activities, when vehicle tires need replacement, old tires will be disposed of through a tire distribution and sales business using licensed vehicles for transportation</li> </ul> <p><b><u>Solar Panels</u></b></p> <ul style="list-style-type: none"> <li>• Unused and/or end-of-life solar panels will be temporarily stored in an area determined by the beneficiary for a maximum of 6 months, in a way that does not pose an OHS and environmental risk.</li> </ul>	<p>Contractor</p>
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		<ul style="list-style-type: none"><li>• PV panels taken to licensed facilities with licensed vehicles after temporary storage will be primarily recycled, and those that cannot be recycled will be disposed of in accordance with the relevant legislation.</li></ul> <p><b><u>Excavation, and Drilling Wastes:</u></b></p> <ul style="list-style-type: none"><li>• In the event of designated materials resulting from dismantling activities, a document will be obtained from the building management confirming the delivery of the materials.</li><li>• The collection of construction/demolition wastes and their priority recycling, especially for use as infrastructure materials, will be addressed. Excavation wastes will be sent to the relevant municipal waste storage facility. A formal letter from the Municipality stating that the wastes will be accepted at the site will be obtained and submitted to the Administration.</li></ul> <p><b><u>Waste Batteries and Accumulators:</u></b></p> <ul style="list-style-type: none"><li>• Waste batteries and accumulators will be transported to authorized disposal facilities for waste batteries and accumulators within the municipal boundaries.</li></ul> <p><b><u>Hazardous Wastes:</u></b></p> <ul style="list-style-type: none"><li>• In the temporary storage of hazardous wastes on the project site, the wastes will be kept in secure, leak-proof, and internationally accepted standard containers within the project area. The containers will be labeled as hazardous waste, and information such as the waste code, quantity, content, characteristics, protection conditions, and storage date of the stored substance will be specified on the containers. Hazardous substances can be stored temporarily for a maximum of 6 months. (Temporary storage areas will be determined by the contractor in accordance with the regulations, with permission obtained from the Student Dormitory Administration, and these areas will be reported to the consultant.)</li></ul>	
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		<ul style="list-style-type: none"><li>• Containers storing hazardous materials and waste oils will be placed in impermeable concrete areas to prevent spillage and leakage into the soil.</li><li>• Harmful substances such as paints with toxic content, solvent, or lead-based chemicals will not be used.</li><li>• The management of hazardous waste will be carried out in accordance with the Waste Management Regulation.</li><li>• Possible hazardous chemical substances and wastes that may occur on the construction site will be sent to licensed disposal facilities using the online program Integrated Environmental Information System (E-ÇBS) of the Ministry of Environment, Urbanization, and Climate Change.</li><li>• Spill containment and leakage absorbent pad kits will be readily available in the work areas. All personnel in charge will undergo training on protection and emergency response related to hazardous chemical spills and leaks.</li><li>• In the event of medium and large-scale environmental accidents, an accident investigation will be conducted and reported.</li><li>• Used fluorescent lamps removed during renovation/construction work will be disposed of at licensed facilities. The necessary documents for transportation and disposal of the material will be kept at the construction site and will be presented to the MoEUCC and the World Bank upon request.</li></ul> <p><b><u>Domestic Waste:</u></b></p> <ul style="list-style-type: none"><li>• Domestic wastes will be separated at the source (plastic, glass, paper, etc.) and efforts will be made to recycle materials that can be recycled. Employees will receive training on proper waste separation.</li></ul>	
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		<ul style="list-style-type: none"><li>• Waste that cannot be recycled will be collected in sealed sanitary waste bins, and it will be sent to the sanitary landfills through the Sariyer Municipality's solid waste collection system.</li></ul> <p><b><u>Asbestos:</u></b></p> <ul style="list-style-type: none"><li>• If asbestos is present on the project site, it will be clearly marked as a hazardous material.</li><li>• In the case of asbestos being present on the project site, it will be properly stored and sealed to minimize its impact.</li><li>• When asbestos removal is necessary, a wetting agent will be used to keep asbestos dust to a minimum before the removal.</li><li>• The entire procedure to be applied regarding asbestos is included in Annex 8 of the Environmental and Social Management Framework document (<a href="https://webdosya.csb.gov.tr/db/kamuguclatma/menu/kadev-p175894_csyc_final100521--mayis_20210510070430.pdf">https://webdosya.csb.gov.tr/db/kamuguclatma/menu/kadev-p175894_csyc_final100521--mayis_20210510070430.pdf</a>). The Contractor will act in accordance with the content in question.</li><li>• If asbestos material needs to be temporarily stored, the waste should be kept in secure containers and properly labeled. Security measures will be taken to prevent unauthorized removal from the site.</li><li>• Removed asbestos will not be reused and will be disposed of in accordance with national regulations and sent to licensed facilities. Necessary documents for transportation and disposal of the material will be kept at the construction site and will be presented to the MoEUCC and the World Bank if requested.</li><li>• Paints containing toxic components, solvents, or lead-based paints will not be used.</li></ul>	
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<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><i>e) Pollution Prevention</i> Demolition and construction activities can lead to pollution on construction sites</p>	<ul style="list-style-type: none"> <li>• Site-Specific Pollution Prevention Plans, if necessary, will be reviewed and approved by the PIU.</li> <li>• Regular site inspections will be conducted by the PIU and the Consultant to ensure that all construction activities are carried out in compliance with national laws and regulations as well as the requirements of the World Bank ESF.</li> </ul>	<p>PIU Consultant Contractor</p>
		<ul style="list-style-type: none"> <li>• Ambient air pollution related to dust formation is specified in the "g. Air quality/Emissions" section of this Table.</li> <li>• Hazardous material will be secured in the designated storage area to prevent spillage and tipping.</li> <li>• Semi-used chemical containers will have lids and be tightly closed when not in use.</li> <li>• Residual (abandoned) concrete in concrete mixers will not be allowed to be poured into the construction site, its surroundings or access roads of the construction sites. Concrete mixer drivers will be given training on this.</li> <li>• In the event of any leakage of hazardous materials or hazardous waste, leak prevention methods will be implemented to limit the area of exposure.</li> <li>• Leakage sets will be placed at appropriate points on construction sites.</li> <li>• In case of any leakage, workers who will respond to such incidents are determined and training is given on emergency response to leaks.</li> <li>• Training records will be kept at construction sites.</li> </ul>	<p>Contractor</p>

<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>f) Noise</b> The presence of workers on the construction site, renovation/construction activities, and the movement of transportation vehicles will increase noise and vibration levels.</p>	<ul style="list-style-type: none"> <li>• Regular site inspections will be conducted by PIU and the Consultant to ensure that all construction activities are carried out in compliance with national laws and regulations and World Bank ESHP requirements.</li> <li>• Noise during demolition and construction will be limited to specified periods as determined in the permit.</li> <li>• During activities, the motor covers of generators, air compressors, and other electrical/mechanical equipment will be closed, and they will be placed as far away from residential areas as possible.</li> <li>• Throughout the construction phase, the motor covers of generators, air compressors, and other mechanical equipment will be kept closed, and the equipment will be placed as far away as possible from student areas and other buildings on the campus not included in the project but located on the campus. The use of plastic wedges is mandatory for all such equipment to prevent excessive noise due to vibration. This should be considered in the selection of equipment.</li> <li>• Impact noise resulting from construction activities will not exceed 100 dBC in the LC Max noise indicator as specified in the Environmental Noise Control Regulation. For occupational health and safety, the World Health Organization (WHO) has set exposure levels to noise at 70 dB within a 24-hour period and 85 dB for a 1-hour period to prevent hearing impairment. Additionally, the World Bank Environmental, Health, and Safety Guidelines Table 1.7.1 stipulate that noise levels should not exceed 55 dB between 07:00-22:00 and 45 dB between 22:00-07:00 for residences/educational institutions and public institutions (<a href="https://www.ifc.org/content/dam/ifc/doc/2023/ifc-general-ehs-guidelines.pdf">https://www.ifc.org/content/dam/ifc/doc/2023/ifc-general-ehs-guidelines.pdf</a>). This will be taken into account during site inspections</li> <li>• Following the start of construction, noise levels will be measured once indoors and outdoors by accredited laboratories during the demolition process and the necessary precautions will be</li> </ul>	<p>Contractor</p>
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		<p>determined as a result of the measurements. If measurements exceed the levels permitted by legislation, measurements will be made at regular intervals every week.</p> <ul style="list-style-type: none"><li>• As a result of the measurements, if necessary, noise curtains will be placed to prevent nearby settlements from being affected by noise.</li><li>• Site assessments will be conducted according to the Environmental Noise Guidelines for the WHO European Region.</li><li>• If there is an increase in the noise level during the construction phase, measures will be taken to ensure that machines are not operated simultaneously.</li><li>• The work schedule of works that create high levels of noise will be planned in coordination with people in nearby buildings.</li><li>• Necessary communication will be provided with the public in the nearest settlement in order to determine the impact of noise that will occur during construction works and to take the necessary precautions.</li><li>• Measures such as using new model vehicles as much as possible will be taken to minimize noise levels.</li><li>• The unnecessary use of horns and sirens by vehicles transporting machinery, equipment, materials, and personnel within the scope of the project is prohibited. This rule applies to both within and outside the campus. Contact numbers will be provided on vehicles to address and resolve grievances related to such issues.</li></ul>	
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<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><i>g) Air Quality/Emission</i></p>	<ul style="list-style-type: none"> <li>• Demolition debris will be kept in a controlled area, and water will be sprayed to reduce dust from the debris. (Water will be provided from the campus infrastructure. In case of prolonged water interruptions, water tankers may be used for supply.)</li> <li>• Following the start of construction, dust measurement will be carried out once by accredited laboratories indoors and outdoors during the demolition process. The principles for preventing air quality problems occurring during demolition activities will be determined in the Construction Methods (which will be prepared by the contractors and approved by the PIU).</li> <li>• Improvement and retrofitting works will mainly take place inside buildings. Dust generated during scraping and stripping operations will be suppressed by continuous water spraying.</li> <li>• In case of rubble waste generation, a rubble chute will be used after the first floor.</li> <li>• The surrounding environment (sidewalks, roads) will be cleared of debris to minimize dust.</li> <li>• Open burning of construction materials/waste substances will not be allowed at the construction site.</li> <li>• Construction vehicles at the construction site will not be idled for an excessive period.</li> <li>• When material needs to be transported, truck tops will be covered. The speed limit for such vehicles within the campus is set at 20 km/h.</li> <li>• All vehicles to be used will have exhaust emission permits, and regular maintenance will be conducted on all vehicles or monitored for maintenance.</li> </ul>	<p>Consultant Contractor</p>
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<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>h) Water Quality</b> Uncontrolled disposal of wastewater/waste generated at the construction site can affect the coastline.</p> <p><b>i) Soil Quality</b> The mixing of hazardous substances and waste into the soil</p>	<ul style="list-style-type: none"> <li>• Storage or disposal of waste generated at the construction site will be minimized.</li> <li>• To avoid possible negative impact on surface waters, temporary or final waste disposal near/in flowing water is strictly prohibited.</li> <li>• Construction vehicles and machinery will only be washed in areas where surface runoff will not contaminate natural surface water bodies.</li> <li>• The disciplined implementation of waste management mentioned in previous sections is necessary.</li> <li>• All hazardous chemicals (including contaminated waste) will be stored in temporary storage areas that meet leakproof requirements.</li> <li>• Before the use of chemicals, MGBFs (Material Safety Data Sheets) must be checked by the OHS Specialist and Occupational Health Physicians, and users need to be informed.</li> <li>• Leak pads will be provided for point source pollution in the field (such as spilled paint, oil leaks from vehicles, etc.), and all employees will undergo leak and spill training. These trainings will be reinforced with exercises. At least one leak spill kit will be provided for each building and each mobile machine.</li> </ul>	<p>Consultant Contractor</p>
<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b>j) Required Resources</b></p>	<ul style="list-style-type: none"> <li>• Contractors will obtain the necessary permits from building authorities to use water from the public network for construction activities. In case of any issues with obtaining permits, water will be brought to the construction sites using tankers.</li> <li>• Concrete will be sourced from locally licensed ready-mix concrete facilities.</li> <li>• Permission will be obtained from the beneficiaries for the electricity to be used in construction activities. If permission cannot be obtained, electricity will be provided through generators to be provided by the Contractor. Records regarding electricity, fuel (for generators) and water consumption to be used for construction activities will be kept at construction sites.</li> </ul>	<p>Contractor</p>

		<ul style="list-style-type: none"> <li>Regular on-site inspections will be conducted by the PIU and the Consultant to ensure that all construction activities are carried out in compliance with national laws, regulations, and the requirements of the World Bank standards.</li> </ul>	<p>PIU Consultant</p>
<p>Renovation and Retrofitting Works for Seismic Resilience and Energy Efficiency Improvement in Public Buildings</p>	<p><b><i>k) Community Health and Safety/Traffic and Pedestrian Safety</i></b></p>	<ul style="list-style-type: none"> <li>Regular site inspections will be carried out every two months by the PIU and daily by the Consultant to ensure and monitor that all construction activities are carried out in accordance with national laws and regulations, the requirements of the World Bank standards and the Occupational Health and Safety Plan prepared for the Campus.</li> <li>PIU will review and approve the site-specific Community Safety and Traffic Management Plan prepared in accordance with the Occupational Health and Safety Plan.</li> <li>The Contractor will develop a Traffic Action Plan, taking into account the needs of people with disabilities, as prepared by the Consultant.</li> <li>In accordance with national regulations and the World Bank ESF, the Contractor will ensure the proper securing of the construction site and the regulation of construction-related traffic.</li> <li>Signboards, warning signs, barriers, and traffic guidance will be clearly visible at the construction site, and the public will be alerted to all possible dangers.</li> <li>Traffic management systems and personnel training will be provided, especially for access to the construction site and heavy traffic near the construction site. Safe crossings and passages for pedestrians will be provided at intersections with construction traffic.</li> <li>Adjustments to working hours will be made based on local traffic patterns, such as avoiding heavy transport activities during peak hours or times when livestock is being transported.</li> <li>Active traffic management will be carried out by trained and visible personnel at the construction site, if necessary, for the safe and comfortable passage of the public.</li> </ul>	<p>Consultant Contractor</p>

		<ul style="list-style-type: none"> <li>• Construction sites will be surrounded by health and safety signs to prevent potential accidents.</li> <li>• If there will be a disruption of electricity, water, or natural gas supply due to construction activities in the short or long term, advance notice will be provided to the building technical units, and approval will be sought.</li> <li>• Construction sites will be separated and secured with warning/caution tapes to ensure safety.</li> <li>• All types of vehicles operating during construction will be required to adhere to the specified speed limit.</li> <li>• The surroundings and surroundings of the project site will be arranged with traffic signs and warning signs. The Traffic Action Plan is included in the Occupational Health and Safety Plan prepared by the Consultant. In addition, the security-related measures to be taken will be specified in more detail in the Community Safety and Traffic Management Plan that the Contractor will prepare before starting work.</li> <li>• Visibility of the project site will be ensured.</li> <li>• Pedestrian paths and vehicle thoroughfares within the site will be separated from each other. These paths will be incorporated into the traffic plan.</li> <li>• Local community, building visitors, and users will be informed about potential hazards and risks through warning signs and informational meetings.</li> <li>• Users and other stakeholders will be informed about the measures to be taken in case of any outbreak, including the precautions taken, through appropriate media and printed materials and signs in accessible areas for the public (including work areas).</li> <li>• Pedestrian paths and vehicle thoroughfares within the site will be separated from each other. These paths will be incorporated into the traffic plan.</li> </ul>	<p>Consultant Contractor</p> <hr/> <p>Consultant Contractor</p>
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		<ul style="list-style-type: none"> <li>• Activities that will affect regional traffic will be planned considering peak traffic hours as much as possible. All drivers involved in the project will be informed about road safety, speed limits, traffic rules to be followed during the project, and conditions to be observed.</li> <li>• The weights of all vehicles used in the project will not exceed the limits specified in the relevant legislation.</li> <li>• In the event of hazardous chemical or waste storage on the site, the transfer of these wastes will be carried out by licensed carriers in a manner that does not pose a threat to public health.</li> <li>• Special loads will use routes prepared in agreement with the relevant authorities. The specified routes will be programmed to prevent traffic congestion on the roads and will be published in advance to prevent possible inconvenience.             <ul style="list-style-type: none"> <li>• All traffic organization will be discussed and planned in coordination with the relevant authorities.</li> </ul> </li> </ul>	
<p>Operational phase impacts and risks</p>	<p><b><i>a) Waste Management</i></b> Improper waste management with various waste streams can lead to possible adverse environmental and health effects (inadequate waste management can result in direct and indirect pollution in water and soil and can affect air quality).</p>	<p>a. Waste streams will be collected separately, stored, and disposed of through licensed companies in accordance with national regulatory requirements.</p>	<p>Relevant beneficiary institution</p>

<p>Operational phase impacts and risks</p>	<p><b><i>b) OHS risks</i></b> Maintenance and repair activities related to the proper functioning of the building can pose occupational health and safety (OHS) risks for workers.</p>	<ol style="list-style-type: none"> <li>a. Relevant OHS risks will be reduced through the provisions specified in national legislation.</li> <li>b. Regular preventive measures and maintenance precautions for the proper functioning of the building (regular inspections and maintenance for any leaks on the roof, windows, doors, etc.).</li> <li>c. Keeping records related to the Main Design Project and relevant project documents for easy maintenance and renovation of any part of the building.</li> </ol>	<p>Relevant beneficiary institution</p>
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<p>Throughout the project lifecycle</p>	<p><b><i>Stakeholder Feedback (Suggestion, Grievance, Opinion)</i></b></p>	<ul style="list-style-type: none"> <li>• The responsible employee of the Construction Contractor will collect, record and forward the grievances/opinions/suggestions arising from the construction activities at the field scale to the administration through the forms given in Annex III and Annex IV. Grievances will be closed via the Grievance Closeout Form in Annex V.</li> <li>• The site supervisor of the Contractor will be provided with training on the operation of the Grievances Mechanism by the Social Specialist of the Consultant firm.</li> <li>• Corrective actions will be taken within 15 working days for grievances/opinions/suggestions collected under the project, and if the grievance period exceeds 15 days (the grievance period will not exceed 30 calendar days), this matter should be agreed upon between the Contractor/PIU and the complainant. At the end of the process, the applicant will be informed that the request has been closed.</li> <li>• In cases of gender-based violence, sexual abuse, and harassment, proceedings will be conducted in accordance with the principle of confidentiality, taking into account the possibility of retaliation.</li> <li>• In the event of encountering a sexual abuse crime, legal action (reporting the situation to law enforcement authorities, referral to the relevant public institution) will be initiated immediately with the consent and knowledge of the survivor of this crime. In the event of such a situation, the PIU Social Specialist will be informed on the same day.</li> <li>• The Contractor will follow the GM Procedure of the SREEPB Project in all activities related to GM.</li> <li>• All personnel working within the SREEPB Project (PIU, Consultant Firm, Contractors) can report their grievances/views/suggestions to the Administration and/or the World Bank following the process in GM outlined in the Labour Management Procedure for SREEPB Project.</li> </ul>	<p>PIU Consultant Contractor</p>
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		<ul style="list-style-type: none"><li>• The Contractor will announce the contact information specified in this report for the collection of suggestions and grievances using information boards allocated to the outside and inside of the buildings (at least one for each floor).</li><li>• The principles for receiving feedback are explained under the "4. Stakeholder Engagement and Grievance Mechanisms" title of this document..</li></ul>	
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## 6. Environmental and Social Monitoring Plan

**Table 5: ENVIRONMENTAL AND SOCIAL MONITORING PLAN**

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
<b>Renovation and Retrofitting Works Site Preparation Activities</b>					
Community Health and Safety Management and Implemented Protective Measures	Around the project site	Visual Inspections Site Inspection	At the beginning of the renovation/reinforcement works (first day) Every working day throughout the project activities	To minimize health and safety risks and mechanical injuries to local communities	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Occupational Health and Safety (OHS) protection measures for construction site workers	Project site and buildings near the project site	Visual Inspections Site Inspection	Every working day throughout the project activities	Minimizing occupational health and safety risks for workers, especially those involved in removing asbestos-containing roof covers, through the provision of protective equipment and clothing. Compliance with the Occupational Health and Safety Law, relevant regulations, notifications, directives, and other regulations.	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
To avoid and minimize safety and health risks for individuals affected by the project	In the building and at the project site	Visual Inspections	At the beginning of the renovation/retrofitting work and continuously every working day	Preventing Post Activation Potential (PAP) injury due to inhalation of asbestos fibers or other construction dust.	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
The start and completion time of Renewal/Retrofitting works, especially the removal time of existing parts containing asbestos	At the project site	Site Inspection Review of document records Visual Inspections	Every day (In case asbestos is detected)	To avoid environmental, health, and safety risks Compliance with the Regulation on Health and Safety Measures in Asbestos Work	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant Asbestos Removal Specialist</li> </ul>
<b>Renovation and Retrofitting Construction Works</b>					

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Occupational Health and Safety (OHS) Protection Measures for Site Workers <i>(Working at Heights, Working with Hazardous Materials, Working with Rotating Equipment, Working with Electrical Devices, etc.)</i>	Project site  Buildings near the project site	Verification of Relevant OHS Certifications and Documents for Trained Workers  Visual Inspections for the Use of Protective Equipment  Implementation of the OHS Plan and Site-Specific Health and Safety Instructions  Site Inspections  Record Verification	Before starting demolition work  Every working day throughout the project activities	Minimizing risks to workers' occupational health and safety  Compliance with the Occupational Health and Safety Law, relevant regulations, communiqués, circulars and other regulations	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Manufacturing, Operation and Delivery (pipeline manufacturing and construction)	Project site	Visual checks, Field Control Records, Required Tests, Control of Personnel Adequacy by the relevant authority	During the relevant manufacturing process in the project and when the manufacturing is completed	Confirming that pipeline construction is complete before delivery. To prevent a possible disaster after production and delivery to the end user.	<ul style="list-style-type: none"> <li>Beneficiary Institution</li> <li>Service Provider Institution OHS Department</li> <li>Advisor</li> <li>Contractor</li> </ul>
Employment and working conditions	Project site	Final OHS Plan Review Site Inspection Grievance Mechanism (Feedback)	Every working day during the project activities	Compliance with the Occupational Health and Safety Law, relevant regulations, communiqués, circulars and other regulations	<ul style="list-style-type: none"> <li>Contractor</li> <li>Consultant</li> </ul>
Health and Safety records	Project site	Health and Safety construction site documentation control	Weekly	Ensuring that necessary Occupational Health and Safety records are kept at construction sites	<ul style="list-style-type: none"> <li>Contractor</li> <li>Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Air Quality	Project sites, across access roads Project site Buildings near the project site	Site Inspection  Measurements to be carried out in case of grievance	Every working day throughout the project activities	Minimizing dust generation to avoid negative impact on local communities and the environment Air Quality Assessment and Management Regulation	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
Noise	Project site Buildings near the project site	Visual control of the implementation of established noise abatement measures, including declarations of methods followed  Monitoring at the nearest building receiver points with a noise measuring device  Site inspections  Measurements to be carried out in case of grievance	Every working day during construction activities	Minimizing noise to avoid negative impact on local communities and the environment Compliance with Environmental Noise Control Regulation	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Waste Management	Project site	Waste Records Site Inspection Visual Inspections	Every working day during construction activities	Prevent pollution to protect construction workers, beneficiaries' employees, local communities and the environment	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
Domestic Wastes	Project site	Waste Records Site Inspection	Throughout the project lifecycle/Daily	<ul style="list-style-type: none"> <li>• Regulation on Control of Packaging Wastes</li> <li>• Waste Management Regulation</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor</li> </ul>
Hazardous Wastes	Project site	Waste Records Site Inspection Visual Inspections	Throughout the project lifecycle/Daily	Separating hazardous waste (adhesive, paint, insulation material, packaging waste) from non-hazardous waste and biodegradable waste	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Identifying asbestos-containing waste, packaging it properly, labeling it as hazardous waste	At project construction sites  Before starting removal/dismantling work	Identification of asbestos-containing waste according to the waste list  Site inspection  Review of document records	Throughout the project lifecycle/Daily  In case of detection	<ul style="list-style-type: none"> <li>Regulation on Health and Safety Measures in Working with Asbestos</li> </ul>	<ul style="list-style-type: none"> <li>Consultant</li> </ul>
Proper temporary storage, packaging and labeling of the extracted waste	Project site	Waste Records  Site Inspection  Visual Inspections	Throughout the project lifecycle/Daily	To minimize injuries, To prevent environmental pollution, Ensuring that inventory is kept properly. <ul style="list-style-type: none"> <li>Waste Management Regulation</li> </ul>	<ul style="list-style-type: none"> <li>Contractor</li> <li>Consultant</li> </ul>
Excavation and Construction Waste	Project site	Visual inspection  Transport records  Site inspection	After the removal of all parts of the buildings containing hazardous materials Throughout the project lifecycle/daily	Ensuring that construction debris is disposed of in accordance with applicable national regulations and the Project's Demolition plan <ul style="list-style-type: none"> <li>Regulation on the Control of Excavation Soil, Construction and Demolition Waste</li> </ul>	<ul style="list-style-type: none"> <li>Contractor</li> <li>Consultant</li> </ul>



<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Soil Pollution	Project sites, external storage areas and access roads	Training records check (spill, leak training)  Chemical absorbent kit control (Field, mobile work machines)  Site Inspection	Throughout the project lifecycle/daily	Protection of soil and groundwater quality. <ul style="list-style-type: none"> <li>• Regulation on Soil Pollution Control and Contaminated Sites by Point Sources,</li> <li>• Water Pollution Control Regulation</li> <li>• Regulation on the Protection of Groundwater Against Pollution and Deterioration</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>
Vehicle and Pedestrian Safety	Project sites and access roads	Visual inspection  Using appropriate signs and signals  Site inspection	Daily	Protecting construction workers, their beneficiaries' employees, and local communities from injuries and deaths related to traffic accidents.	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> </ul>

<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
Stakeholder engagement	Istanbul Technical University Campus	Number of Stakeholder Engagement Meeting participants (by gender distribution)  Promotional materials related to the project (announcement posters, webcasts, etc. control)	Daily	Fulfillment of grievance mechanism requirements.	<ul style="list-style-type: none"> <li>• PIU</li> <li>• Contractor</li> <li>• Consultant</li> </ul>

<p>Grievance Mechanism</p>	<p>Project site</p> <ul style="list-style-type: none"> <li>• Buildings near the project site</li> </ul>	<p>Grievance and Suggestion Forms</p> <p>Grievance Close-out forms</p> <p>Total number of grievances (pending/resolved and broken down by gender distribution)</p> <p>Number of grievances received</p> <p>Number of resolved grievances</p> <p>Grievance Log</p> <p>Availability of announcement posters regarding the Grievance Mechanism (GM)</p> <p>Physical condition of suggestion and grievance boxes</p> <p>Suggestion, condition of</p>	<p>Weekly (During the life of the project)</p>	<ul style="list-style-type: none"> <li>• Environmental Social Management Plan (ESMP)</li> <li>• Grievance Mechanism (GM)</li> <li>• Stakeholder Engagement Framework (SEF)</li> </ul> <p>Stakeholders who are directly or indirectly affected by the project can bring forward their grievances/opinions/suggestions regarding project activities, contribute to the project and benefit from the project at the highest level.</p>	<ul style="list-style-type: none"> <li>• Contractor</li> <li>• Consultant</li> <li>• PIU</li> </ul>
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<b>What</b> <i>parameters will be monitored?</i>	<b>Where</b> <i>parameters will be monitored?</i>	<b>How</b> <i>parameters will be monitored?</i>	<b>When</b> <i>parameters will be monitored (measurement frequency)?</i>	<b>Why</b> <i>parameters will be monitored?</i>	<b>Responsibility</b>
		grievance boxes locking mechanisms			
<b>Renovation/Retrofitting Works Operation Process</b>					
Waste streams	Renovated/Retr ofitted buildings	Implementation of waste management requirements on site	Regularly (throughout the project lifecycle)	Ensuring proper collection and disposal of waste in accordance with national legal requirements	Istanbul Technical University
Health and Safety	Renovated/Retr ofitted buildings	Regular inspections and maintenance of the roof, windows, doors, leaks, etc.	Regularly (throughout the project lifecycle)	Ensuring the health and safety of building users	Istanbul Technical University

## 7. Duties and Responsibilities

**Table 6: TASK DISTRIBUTION LIST**

<b>RESPONSIBLE PARTY</b>	<b>RESPONSIBILITY</b>
MoEUCC /PIU	<ul style="list-style-type: none"> <li>• Implementation and monitoring of the project, and utilization of funds.</li> <li>• Employment of at least one full-time Environmental, Social, and Occupational Health and Safety (OHS) expert.</li> <li>• Conducting necessary correspondence with official authorities and ensuring follow-ups.</li> <li>• Supervising and ensuring compliance of Environment and Social Management Plans (ESMPs) with both national regulations and WB policies specific to the project.</li> <li>• Presenting the prepared ESMPs to the WB after relevant checks.</li> <li>• Establishment of a Grievance Mechanism.</li> <li>• Organizing and conducting project informational meetings.</li> <li>• Employment of a suitable expert for the Environmental and Social Monitoring Program.</li> <li>• Guiding consultants and contractors.</li> <li>• Summarizing environmental and social issues related to project implementation in regular progress reports submitted to the WB.</li> <li>• Coordinating and liaising with WB's inspection missions regarding the evaluation of project implementation in terms of environmental and social mitigation policies.</li> <li>• Supervising the contractor's ESMP implementation and documenting necessary performance, suggestions, and future activities as part of the general project audit.</li> <li>• Ensuring the contractor corrects the application if ESMP is not followed and informing the WB about the issue.</li> <li>• Assisting the consultant if needed to obtain necessary permits throughout the project.</li> <li>• Report any significant incidents (such as accidents, leaks, deaths) to the World Bank within 2 days (48 hours) and send an incident investigation report with a corrective action plan to the World Bank within 30 business days.</li> </ul>
CONSULTANT	<ul style="list-style-type: none"> <li>• Conducting a preliminary site assessment before the project starts,</li> <li>• If at least one Environmental, one Social and one OHS expert is employed full-time</li> <li>• Preparation of the project-specific ESMP and OHS Plan,</li> <li>• • Monitoring, evaluating and submitting to the Administration the activities defined as the responsibility of the contractor in the ESMP and OHS Plan,</li> <li>• Ensuring the operation of the Grievance Mechanism established by the Ministry,</li> <li>• Providing reports to the MoEUCC on the project and ESMP processes,</li> <li>• Preparation of the Traffic Management Plan,</li> <li>• Review and approval of Construction Methods prepared by the contractor,</li> <li>• Application to the energy distribution company for the installation of PV,</li> <li>• Providing training for the contractor (Environmental Impacts, Waste Management, OHS Plan Implementation and Monitoring Training, Response to Environmental Emergencies, Energy Efficiency, <i>Stakeholder Engagement and Information Activities, Code of Conduct, Grievance Mechanism, Gender-</i></li> </ul>

	<p><i>Based Violence/Sexual Exploitation/Sexual Abuse/Sexual Harassment, Lockout-Tagout Training (LOTO), Work Permit System Training, Conservation of Cultural Assets)</i></p>
CONTRACTOR	<ul style="list-style-type: none"><li>• Employing at least one full-time Environmental and one full-time OHS expert.</li><li>• Appointing an experienced Environmental and OHS Officer for the comprehensive management and monitoring of the site-specific ESMP and OHS Plan.</li><li>• Implementing laws, regulations, and rules related to ESMP and OHS Plan attached to the tender documents as defined by the Consultant.</li><li>• Implementing relevant laws and regulations mentioned in the tender documents in an appropriate manner.</li><li>• Updating ESMP and OHS Plan content in coordination with the Consultant during the implementation of ESMPs and OHS Plan in the field as necessary.</li><li>• Preparation of the OHS Plan for the activities to be carried out, taking into account the OHS Plan prepared by the Consultant, Monitoring the field activities defined in the ESMPs prepared specifically for the project at regular intervals (daily, monthly, etc.),</li><li>• Operating the Grievance Mechanism in compliance with GM Procedure established by the Ministry.</li><li>• Examination of the ESMP prepared by the Consultant, commitment to implement it or preparation of the Contractor ESMP by the contractor and relevant sub-management plans of the ESMP (e.g. Waste Management Plan, Pollution Prevention Plan, Community Safety and Traffic Management Plan, Occupational Health and Safety plan, etc.) and preparation of work-specific construction/application methods,</li><li>• Preparing the Random Finding Procedure if deemed necessary.</li><li>• Preparing ESMP progress reports for MoEUCC.'s review.</li><li>• Applying to the authorized energy distribution company and local gas distribution company depending on the works to be carried out.</li><li>• Establishing the Employee Grievance Mechanism detailed in the Labor Management Procedure before any construction work starts and ensuring its transparent operation.</li><li>• Preparing the Labour Management Plan specific to the project considering SREEPB Labor Management Plan (LMP)<sup>8</sup>.</li></ul>

<sup>8</sup> [https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/kadev-p175894\\_iscucuyonetimprosedurleri-nihai\\_tr\\_20210527081102.pdf](https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/kadev-p175894_iscucuyonetimprosedurleri-nihai_tr_20210527081102.pdf)

## 8. Reporting

The details regarding the reporting requirements of the project are presented within the Environmental and Social Management Framework disclosed on the website of the SREEPB Project (<https://kamuguclendirme.csb.gov.tr>). A summary of this information is provided in Table 8.

**Table 7: REPORTING PROCESS REQUIREMENT LIST**

<b>RESPONSIBLE PARTY</b>	<b>REPORTING PROCESS REQUIREMENT</b>
MoEUCC /PIU	<ul style="list-style-type: none"> <li>• Preparation of the 6-month Project Progress Report and submission to the World Bank (WB).</li> <li>• Reporting any significant events such as accidents, leaks, deaths, etc., to the World Bank within 48 hours and submitting an incident investigation report along with a corrective action plan within 30 working days.</li> <li>• Monthly updates to the WB about the functioning of the Grievance Mechanism.</li> </ul>
CONSULTANT	<ul style="list-style-type: none"> <li>• Preparation of end-of-implementation ESMP reports for the Administration's review.</li> <li>• Preparation of monthly of ESMP progress reports and submission to the Administration.</li> <li>• Preparation of monthly of GM reports and submission to the Administration</li> <li>• Immediate reporting of any important events such as accidents, leaks, deaths, sexual harassment/abuse to the PIU.</li> </ul>
CONTRACTOR	<ul style="list-style-type: none"> <li>• Monthly preparation of ESMP progress reports and submission for approval by the Consultant.</li> <li>• Weekly preparation of SM reports and submission to the Project Manager of the Consultant.</li> <li>• Immediate reporting of any significant events such as accidents, leaks, deaths, sexual harassment/abuse to the Consultant.</li> <li>• Incident/Accident and Root Cause Analysis Reports will be prepared.</li> <li>• Report content details are presented within the Environmental and Social Management Framework.</li> </ul>

## Annex I: Solid Models of Building Considered within the Scope of the Project

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**VADI STUDENT DORMITORIES E BLOCK**



**VADI STUDENT DORMITORIES E BLOCK**

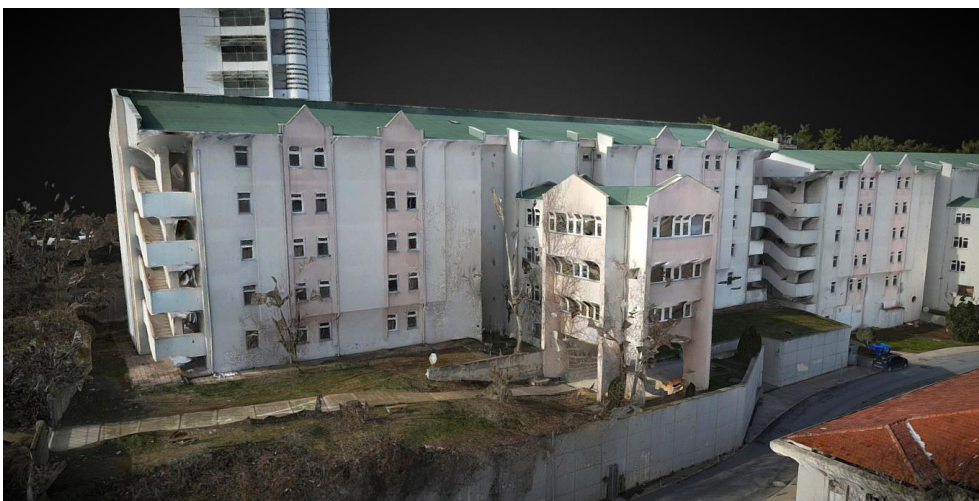




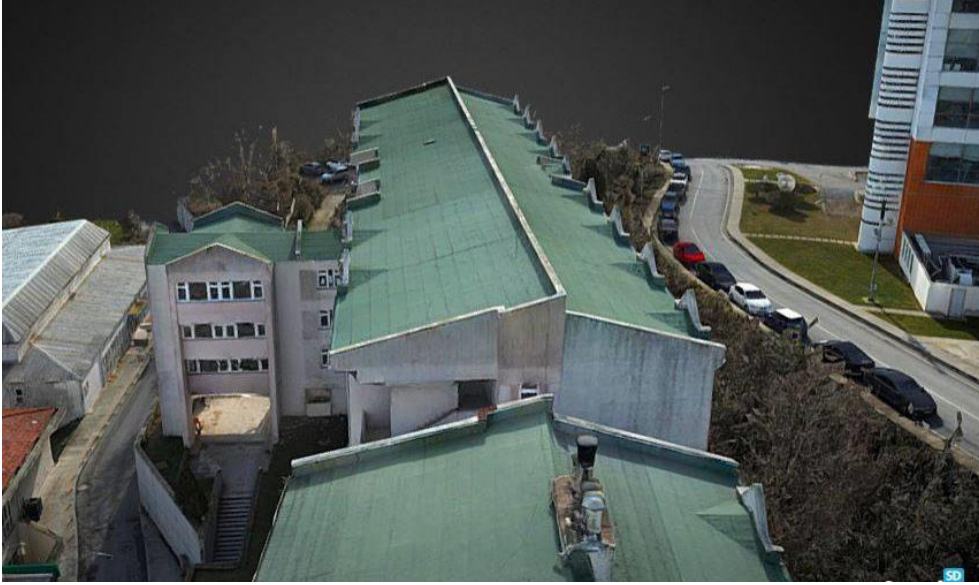
**VADI STUDENT DORMITORIES D BLOCK**



**VADI STUDENT DORMITORIES C BLOCK**



**VADI STUDENT DORMITORIES B BLOCK**



**VADI STUDENT DORMITORIES B BLOCK**



**VADI STUDENT DORMITORIES DINING HALL**

## Annex II: World Bank (WB) Environmental and Social Standard Summaries

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Summary explanations of the World Bank Environmental and Social Standards (ESS) are included in Annex 2/Table 1.

**Annex-2/Table 1: WORLD BANK ENVIRONMENTAL SOCIAL STANDARDS SUMMARY**

<b>ESS</b>	<b>SUBJECT</b>	<b>SUMMARY REQUIREMENT</b>
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	<p>ESS1 aims to achieve environmental and social outcomes consistent with Environmental and Social Standards (ESS) by defining the responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with a project supported by the World Bank through Investment Project Financing at every stage.</p> <p>Environmental and social assessments will be conducted based on current information/data to define and describe the project and all related aspects, identify the nature of risks, impacts, and characteristics of mitigation measures.</p> <p>The assessment will prioritize disadvantaged and/or vulnerable social groups, evaluate potential environmental and social risks and impacts of the project, examine project alternatives, and identify ways to improve project design and implementation to mitigate adverse environmental and social effects. The environmental and social assessment will also explore opportunities to enhance the positive impacts of the project.</p> <p>According to ESS1, stakeholder participation is an integral part of the assessment, following ESS10. Under ESS1, the Borrower will systematically identify, evaluate, and manage environmental and social risks and impacts throughout the project's lifecycle.</p>

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS2	Labor and Working Conditions	<p>The objectives of ESS2 are as follows: (i) promote safety and health in the workplace; (ii) encourage fair treatment of project workers, prevent discrimination, and promote equal opportunities; (iii) protect workers, including vulnerable workers such as women, disabled individuals, children (according to ESS2 working age), migrant laborers, contracted workers, community workers, and primary supply workers, in an appropriate manner; (iv) prevent all forms of forced labor and child labor; (v) support the principles of organizing and collective bargaining freedom for project workers in a manner consistent with national law; and (vi) provide accessible means for project workers to raise workplace concerns. The applicability and scope of ESS2 depend on the type of employment relationship between the Borrower and project workers, as well as the environmental and social assessment described in ESS1. ESS2 requirements cover the development and implementation of a written Labor Management Procedure (LMP) that will be applicable to the project. These procedures will determine how project workers are managed in compliance with national law and the requirements of this ESS. They will also define (i) working conditions and employment, including non-discrimination and equal opportunity provisions, which will be monitored by project contractors following the procedures for labor management and behavior rules; (ii) protection of workers, including the prohibition of child labor and forced labor; (iii) the establishment and operation of a grievance mechanism for workers, including regulations for potential risks of Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), and (iv) occupational health and safety. Furthermore, it will encompass (v) contracted workers, (vi) community workers, and (vii) primary supply workers.</p>

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS3	Resource Efficiency and Pollution Prevention and Management	<p>ESS3 recognizes that economic activities and urbanization largely pollute the air, water, and soil and consume limited resources at local, regional, and global levels, threatening people, ecosystem services, and the environment. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the well-being of current and future generations. Additionally, technologies and practices to achieve more efficient and effective resource use, pollution prevention, and avoidance of greenhouse gas emissions have become more accessible and available. This ESS establishes the requirements for addressing resource efficiency and pollution prevention and management throughout the project life cycle, consistent with Good International Industry Practices. Risks and impacts related to relevant ESS3 requirements, including raw materials, water use, air pollution, hazardous substances, and hazardous waste, are assessed, and proposed mitigation measures are included in the ESMF and ESMP.</p>
ESS4	Community Health and Safety	<p>ESS4 acknowledges that project activities, equipment, and infrastructure can increase communities' exposure to risks and impacts. Additionally, communities already exposed to the effects of climate change may be further exposed to impacts due to project activities.</p> <p>ESS4 addresses health, safety, and security risks and their impacts on communities affected by the project, with special attention to individuals who could be harmed due to their specific circumstances.</p>
ESS5	<p>Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement <b>(This ESS is not applicable to the SREEPB Project)</b></p>	<p>ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse effects on communities and individuals. Project-related land acquisition or restrictions on land use can lead to physical displacement (relocation, loss of housing or shelter), economic displacement (loss of livelihoods or access to assets resulting in loss of income sources), or both. The term "involuntary resettlement" refers to these effects when affected individuals or communities do not have the right to refuse land acquisition or restrictions on land use.</p>

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources <b>(This ESS is not applicable to the SREEPB Project)</b>	The environmental and social assessment specified in ESS1 will consider direct, indirect, and cumulative effects on habitats and the biological diversity they support. This assessment will consider threats to biological diversity such as habitat loss, degradation and fragmentation, invasive alien species, overuse, hydrological changes, nutrient loading, pollution, and incidental capture, as well as the anticipated impacts of climate change. It will determine the importance of biodiversity or habitats based on their global, regional, or national vulnerabilities and irreplaceability. It will also consider different values placed on biodiversity and habitats by stakeholders affected by the project and other relevant stakeholders.
ESS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities <b>(This ESS is not applicable to the SREEPB Project)</b>	This ESS acknowledges that Historically Underserved Indigenous Peoples/Sub-Saharan African Traditional Indigenous Communities have distinct identities and perspectives from mainstream groups in national societies and are often disadvantaged by traditional development models.
ESS8	Cultural Heritage	The Borrower will avoid impacts on cultural heritage. In situations where avoidance of impacts is not possible, the Borrower will identify and implement measures to address the impacts on cultural heritage in accordance with the hierarchy of mitigation. When appropriate, the Borrower will develop a Cultural Heritage Management Plan.
ESS9	Financial Intermediaries <b>(This ESS does not apply for the SREEPB Project)</b>	Financial intermediaries will establish and maintain an Environmental and Social Management System (ESMS) to identify, assess, manage and continuously monitor the environmental and social risks and impacts of subprojects.


ESS	SUBJECT	SUMMARY REQUIREMENT
ESS10	Stakeholder Participation and Information Disclosure	<p>This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as a fundamental element of good international practice. Effective stakeholder engagement can enhance the environmental and social sustainability of projects, strengthen project acceptance, and significantly contribute to successful project design and implementation. The Client will engage with stakeholders throughout the project life cycle, starting this engagement at the earliest possible stage of the project development process and at a meaningful time for stakeholder input into project design. The nature, scope, and frequency of stakeholder engagement will be proportionate to both the nature and scale of the project and the potential risks and impacts. Stakeholder engagement is a comprehensive process conducted throughout the project life cycle. When properly designed and implemented, it supports the development of strong, constructive, and responsive relationships crucial for the successful management of the environmental and social risks of a project. Stakeholder engagement, initiated at an early stage of the project development process, is most effective and an integral part of the process of assessing, managing, and monitoring the environmental and social risks and impacts of the project. In consultation with the Bank, the Borrower will develop and implement a Stakeholder Engagement Plan (SEP) proportional to both the nature and scale of the project and the potential risks and impacts.</p>



# Annex III: Suggestion & Grievance Form (Internet)

The internet form visual, which can be accessed at <https://kadevoneri.csb.gov.tr/oneri.jsp>, is below.

**Şikayet / Öneri Formu**

 TÜRKİYE CUMHURİYETİ  
ÇEVRE, ŞEHİRCİLİK VE  
İKLİM DEĞİŞİKLİĞİ BAKANLIĞI

**KAMU BİNALARINDA DEPREM DAYANIMI ve ENERJİ  
VERİMLİLİĞİ PROJESİ (KADEV)**


ŞİKAYET / ÖNERİ FORMU

T C Kimlik Numaranız	
Adınız	
Soyadınız	
İl *	Seçiniz
Bina Adı *	
Şikayetiniz *	
Varsa Engel Durumunuz	Seçiniz
Geri Dönüş Tercihiniz	Seçiniz
E-posta	
Telefon	

**Kaydet**

# Annex IV: Suggestion & Grievance Form (Printed)

The Grievance/Suggestion Form in the Grievance Boxes is given below.

 <b>REPUBLIC OF TURKEY MINISTRY OF ENVIRONMENT, URBANIZATION AND CLIMATE CHANGE</b>	<b>SEISMIC RESILIENCE AND ENERGY EFFICIENCY IN PUBLIC BUILDINGS PROJECT (SREEPB PROJECT)</b>
	<b>GRIEVANCE / SUGGESTION FORM</b>
	<b>BOGAZICI UNIVERSITY</b>
ID Number	
Name	
Surname	
Province	Istanbul
Choose the building:	<input type="checkbox"/> Indoor Swimming Pool <input type="checkbox"/> New Geophysics Building <input type="checkbox"/> Indoor Sports Hall <input type="checkbox"/> Superdom (Car park) <input type="checkbox"/> 1st Student Dormitory <input type="checkbox"/> SFL Block A <input type="checkbox"/> SFL Block B <input type="checkbox"/> Social Facility & Dormitory
Your grievance	
Your disability, if any:	<input type="checkbox"/> Blind <input type="checkbox"/> Deaf <input type="checkbox"/> Physically disabled <input type="checkbox"/> Other <input type="checkbox"/> None
For return:	<input type="checkbox"/> E-mail <input type="checkbox"/> Phone <input type="checkbox"/> Don't want
E-mail	
Phone	

# Annex V Grievance Closeout Form

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The Grievance Closeout Form is presented to your attention below.

Grievance Closing Number	
Description of immediate action required:	
Long-term action description (if necessary):	
Is compensation required?	<input type="checkbox"/> YES <input type="checkbox"/> NO
<b>Corrective Action and Decision Control</b>	
Stage of corrective action	Term and Responsible Institution
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

## COMPENSATION AND FINAL RATINGS

This section will be filled out and signed by the complainant after receiving the compensation fees and resolving the grievance.

Notes:







History:

Complainant:

## Annex VI Stakeholder Engagement Meeting Content & Records (Feasibility Studies)



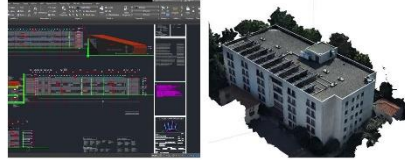




Project Code	WB/CS-DESSUP-01	Building Name	İSTANBUL TECHNICAL UNIVERSITY AYAZAGA CAMPUS
Date	7.03.2023	Start   End Time	14 : 00   15 : 00

START TIME	END TIME	ACTIVITY
14 : 00	14 : 10	Meeting kick-off speech
14 : 10	14 : 15	Within the framework of the Law on the Protection of Personal Data, general information was provided regarding the meeting recording and the processing of personal data. There are no participants who oppose the meeting recording. <ul style="list-style-type: none"><li>As of 14:15, the entire meeting was recorded in *.mp4 video format and *.m4a audio file format. In addition, meeting messages are recorded in *.txt format.</li></ul>
14 : 15	14 : 20	Information was given about the SREEPB project and its objectives. <b>Image 1 PRESENTATION FILE SHARED SECTIONS_01</b>

		 <p><b>KAMU BİNALARINDA DEPREM DAYANIMI &amp; ENERJİ VERİMLİLİĞİ PROJESİ</b></p> <p>Finansmanı Dünya Bankası tarafından sağlanmakta, Hazine &amp; Maliye Bakanlığı garantisinde, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı tarafından yürütülmektedir.</p> <p>  </p> <p><a href="https://kamuguclendirme.csb.gov.tr">https://kamuguclendirme.csb.gov.tr</a></p> <p></p> <p><b>PROJE HEDEFLERİ</b></p> <p>Bu proje kamu binalarında, afet direncini maksimum seviyeye çıkarma ve enerji tasarrufunu iyileştirmeye odaklanmıştır. Bu çerçevede binaların;</p> <ul style="list-style-type: none"><li>• Yapısal olarak güçlendirilmesi,</li><li>• Enerji performanslarının artırılması,</li><li>• Yeniden yenilenebilir &amp; sürdürülebilir enerji üretimi,</li><li>• Enerji yönetim sisteminin teknik alt yapı ile birlikte (Bina enerji talep ve kontrol sistemi, bina otomasyon sistemi vb.) kurulması ve etkinliğinin sağlanması,</li><li>• Proje kapsamında, paydaşlar seviyesinde farkındalık sağlanması,</li></ul> <p>hedeflenmiştir.</p> 
14 : 20	14 : 24	<ul style="list-style-type: none"><li>▪ The general stages of the SREEPB project have been explained. Information was given about the plans and their contents to be prepared together with the project and tender documents.</li><li>▪ <b>Environmental and Social Management Plan;</b> It has been explained that it will determine the environmental and social impacts of the project and include the risks and the actions to be taken to eliminate the risks.</li></ul>

- **Occupational Health & Safety Plan** It has been stated that the occupational health and safety risks related to the manufacturing stages will be determined and the measures to be taken for their elimination will be defined.
- **Stakeholder Engagement Plan** was explained as the documents that will describe the stakeholders who will be directly or indirectly affected by the project and how much information these stakeholders will be informed about the project and project processes, and how feedbacks (suggestions, grievances, etc.) will be collected, examined and answered.
- The importance of stakeholder engagement was mentioned. It was stated that the details of the communication will be announced at the end of the presentation.

**Image 2 PRESENTATION FILE SHARED SECTIONS\_02**

		<div data-bbox="739 255 1243 295">   </div> <div data-bbox="761 311 1198 351"> <p><b>03 GENEL AŞAMALAR</b> Belirlenen, mutabık kalınan önlemlere ilişkin <b>proje &amp; ihale dokümanlarının</b> hazırlanacaktır!</p> </div> <div data-bbox="806 359 1209 518">  </div> <div data-bbox="739 558 1243 598">   </div> <div data-bbox="761 614 1198 654"> <p><b>03 GENEL AŞAMALAR</b> <b>Proje &amp; ihale dokümanları ile birlikte;</b></p> </div> <div data-bbox="806 654 1198 758"> <ul style="list-style-type: none"> <li>• Çevresel Sosyal Yönetim Planları: (Projenin çevresel ve sosyal etkileri belirlenecek, riskler ve risklerin bertarafı için hayata geçirilecek eylemler tanımlanacaktır.)</li> <li>• İş Sağlığı &amp; Güvenliği Planları: (İnşaat operasyonuna ilişkin iş sağlığı ve güvenliği riskleri belirlenecek ve bertarafı için alınması gereken önlemler tanımlanacaktır.)</li> <li>• Paydaş Katılımı Planları: (Projeyle direkt ve dolaylı etkilenecek paydaşlar ve size konuları paydaşların proje ve proje süreçleri hakkında ne kadar nasıl bilgilendirilecekleri, periyotlarının (örnek: aylık veya) nasıl toplanacağı, inceleneceği ve cevaplanacağı tarif edilecektir)</li> </ul> <p><b>hazırlanacaktır.</b></p> </div> <div data-bbox="739 861 1243 901">   </div> <div data-bbox="761 949 1198 989"> <p><b>04 GENEL AŞAMALAR</b> Çevre, Şehircilik ve İklim Değişikliği Bakanlığı tarafından gerçekleştirilen ihale neticesinde belirlenen yüklenici firma (lar) tarafından <b>hayata geçirilen projelerin müzavirlik süreci.</b></p> </div> <div data-bbox="806 1005 1198 1061"> <ul style="list-style-type: none"> <li>• Bir önceki aşamada belirlen ve yüklenici firmalara tebliğ edilen planların tamamını (çevresel, sosyal etkiler, paydaş katılımı, İSG) disiplinli şekilde uygulamaları zorundadır. Müzavirlik süreci sadece malzemelere ilişkin teknik gereksinimlerin değil aynı zamanda bu planların uygulanmasına ilişkin süreçleri de kapsayacaktır.</li> </ul> </div>
14 : 24	14 : 31	<ul style="list-style-type: none"> <li>▪ It was explained that the tests and studies to be carried out for the soil survey to be carried out in order to determine the ground condition and these studies will be carried out according to the characteristics of each building.</li> <li>▪ It was stated what stakeholders and employees should do for occupational health and safety.</li> </ul>

- It has been explained that the professional competence of the employees will be questioned.
- Possible environmental effects related to soil survey, precautions to be taken and considered in this regard were stated.
- The possible social effects of the ground survey, the precautions to be taken and the things to be considered about it were explained.

## Image 3 PRESENTATION FILE SHARED SECTIONS\_03



## YAPISAL FİZİBİLİTE

## ZEMİN ETÜDÜ;

Araştırma çukuru (her bir yapı için en az 1 adet), jeofizik serim (her bir yapı için en az 2), 30m derinlikte sondaj (2-15' ad. arası) ile zemin durumu belirlenecek ve raporlanacaktır. Her bir yapı için bu kapsamda gerçekleştirilecek test, sondaj sayıları belirlenmiştir ve bina teknik birimler ile paylaşılmıştır.



## İŞ SAĞLIĞI GÜVENLİĞİ

Zemin etütüne ilişkin risk analizi gerçekleştirilmiş, iş sağlığı ve güvenliği planları hazırlanmış ve çalışanlara aktarılmıştır. Paydaşlarımızın bu çalışmalara ilişkin dikkat etmeleri gereken konular şunlardır:













- Kazık sondaj makinesi, kamyon marifeti ile sondaj noktalarına getirilecektir. Soz konusu kamyonların kullanımı, manevrasız alanlarda kimsenin zaman geçirmemesi için zararlı halde 20m' den fazla yasaklanmasa gerektirebilir kamyon ve iş makinelerinin zaman zaman 200 km' dir.
- Sondaj kulesinin kaldırılması sırasında, kule etki alanı içinde bina elemanlarını, ayağ düşürme vb. olumsuzluklardan korunmalıdır.
- Sondaj işlemi sırasında 20m' den fazla yasaklanmasa gerektirebilir. Bunun testi için çalışma alanına emniyet jeri ile aykırıdır.
- Sondaj işlemi sırasında çevresel elektrik kablolarını koruyan ekipmanların işin yarım yarıma kesilmesi kullanılmamalıdır.
- Sondaj işlemi sırasında gözetli olarak 95dB ses seviyelerine ulaşılmamalıdır. Bu nedenle çevresel binyetleri konsantrasyonlarının olumsuz yönde etkilenmesi muhtemeldir.
- Çalışma sırasında araştırma çukurluğu ve sondaj delikleri kapatılacaktır. Bu suretle tozlaşma, duman riskleri bertaraf edilmiş olacaktır.





		<div data-bbox="840 258 896 311" data-label="Image"></div> <div data-bbox="896 290 1030 312" data-label="Section-Header"><b>ÇEVRESEL ETKİLER</b></div> <div data-bbox="896 309 1292 339" data-label="Text"> <p>Zemin etüdüne ilişkin olası çevresel etkiler ve alınması gereken önlemler bütün çalışanlara aktarılmıştır. Paydaşlarımızın bu çalışmalara ilişkin dikkat etmeleri gereken konular şunlardır:</p> </div> <div data-bbox="896 347 1292 475" data-label="List-Group"> <ul style="list-style-type: none"> <li>Sonuç içlemleri sırasında güçlü ornek olarak 9SİB seviyelerine ulaşabilmektedir. Bu nedenle çevresel etkilerin kısıtlanmasının önemi olumsuz yönde etkilenmesi muhtemeldir.</li> <li>Sonuç içlemleri, kamyonlu maddelerin taşıdığı riskler açısından değerlendirilmelidir. Özellikle kamyonlu maddelerin taşıdığı riskler açısından değerlendirilmelidir.</li> <li>Sonuç içlemleri, kamyonlu maddelerin taşıdığı riskler açısından değerlendirilmelidir. Özellikle kamyonlu maddelerin taşıdığı riskler açısından değerlendirilmelidir.</li> <li>Sonuç içlemleri, kamyonlu maddelerin taşıdığı riskler açısından değerlendirilmelidir. Özellikle kamyonlu maddelerin taşıdığı riskler açısından değerlendirilmelidir.</li> <li>Sonuç içlemleri, kamyonlu maddelerin taşıdığı riskler açısından değerlendirilmelidir. Özellikle kamyonlu maddelerin taşıdığı riskler açısından değerlendirilmelidir.</li> </ul> </div> <div data-bbox="840 555 896 608" data-label="Image"></div> <div data-bbox="896 587 1023 611" data-label="Section-Header"><b>SOSYAL ETKİLER</b></div> <div data-bbox="896 608 1254 638" data-label="Text"> <p>Zemin etüdüne ilişkin öngörülen sosyal etkiler ve alınması gereken önlemler bütün çalışanlara bildirilmiştir. Paydaşlarımızı aklamak istediğimiz hususlar şunlardır:</p> </div> <div data-bbox="896 644 1292 798" data-label="List-Group"> <ul style="list-style-type: none"> <li>Sonuç içlemleri, bina dayanımı olumsuz etkilenmesi söz konusu değildir.</li> <li>Sonuç içlemleri, bina dayanımı olumsuz etkilenmesi söz konusu değildir.</li> <li>Sonuç içlemleri, bina dayanımı olumsuz etkilenmesi söz konusu değildir.</li> <li>Sonuç içlemleri, bina dayanımı olumsuz etkilenmesi söz konusu değildir.</li> <li>Sonuç içlemleri, bina dayanımı olumsuz etkilenmesi söz konusu değildir.</li> </ul> </div>
	<ul style="list-style-type: none"> <li>Detailed information was given about building structural support, destructive and nondestructive testing, and the process was explained. Information was given about determining the material and observations.</li> </ul>	<div data-bbox="743 1018 799 1070" data-label="Image"></div> <div data-bbox="801 1085 936 1107" data-label="Section-Header"><b>YAPISAL FİZİBİLİTE</b></div> <div data-bbox="801 1107 1090 1128" data-label="Section-Header"><b>BINA TAŞIYICI YAPISI, TAHRİBATLI / TAHRİBATSIZ MUAYENE</b></div> <div data-bbox="801 1126 1164 1201" data-label="List-Group"> <ul style="list-style-type: none"> <li>Bina zemininde araştırma çukurları açılarak temel gözlemi yapılacaktır.</li> <li>Donatı boyutları ve konumları incelenerek, projeler ile karşılaştırılacaktır.</li> <li>Toprak yapı elemanlarından, uygun boyutlarda numuneler alınacak ve akreditasyon laboratuvarlarında dayanım testlerine tabi tutulacaktır.</li> <li>Yerinde yapılan gözlemler ve laboratuvar test sonuçları raporlanacaktır.</li> </ul> </div>

		<p><b>YAPISAL FİZİBİLİTE</b></p> <p><b>BİNA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b></p> <p>Bina zemin/fundasyon kontrolü için; temel kalınlığının bir miktar altına inilecek derinliğe yaklaşık (0,5m<sup>2</sup> yüzey alanı) araştırma çukuru açılır. Açılan çukur görsel olarak kontrol edilerek temel tipi, yapısı, bileşenleri kontrol edilir ve projeler ile kıyaslanır. Açılan çukur ve gözlemleri görsel malzeme resimler çekilir. Araştırma sonrasında çukur uygun biçimde kapatılır.</p> 
		<p><b>YAPISAL FİZİBİLİTE</b></p> <p><b>BİNA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b></p> <p>Taşıyıcı yapı gözlemleri ve numune tespiti:</p> <ul style="list-style-type: none"><li>• Demir tespit cihazları ile bina taşıyıcı elemanlarının içinde yer alan demir miktarı (demir) miktarı, kalınlığı ve oranları belirlenmeye çalışılır.</li><li>• Beton ve demir numune alınacak bölümler seçilir.</li><li>• Numune etiketler değiştirilerek ve numune alınacak yüzeyleri yanına belirtilir.</li></ul> 
14 : 31	14 : 35	<ul style="list-style-type: none"><li>▪ A statement was made about the destructive and nondestructive testing to be done after the soil survey.</li><li>▪ Information was given about the reinforcement and stirrups.</li><li>▪ Explained how to take samples.</li></ul>

		<p><b>Image 5 PRESENTATION FILE SHARED SECTIONS_05</b></p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p><b>YAPISAL FİZİBİLİTE</b></p> <p><b>BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b> Donatı ve etriye nedir?</p> <ul style="list-style-type: none"> <li><b>Donatı:</b> Beton içerisinde çelik çubuklardır. (Beton basınç karşı iyi çalisan bir malzeme olmasına rağmen, çekme dayanımı çok düşüktür. Çekme bölgesindeki gerilmeleri karşılamak üzere, bu bölgeye çelik çubuklar yerleştirilir.)</li> <li><b>Etriye:</b> Kolon, kiriş gibi taşıyıcı sistem elemanlarının; boyuna donatılarını sararın, inşaat çeliğinin bükülmesiyle oldu odılan bir sarğı donatıdır.</li> </ul> <div style="text-align: center;">  </div> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p><b>YAPISAL FİZİBİLİTE</b></p> <p><b>BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE</b> Numunelerin çıkarılması:</p> <ul style="list-style-type: none"> <li><b>Donatı kontrolü:</b> çubukların yüzeyler üzerindeki boyu, ölçü, sarı ve beton katmanlar, kırık marifet ile <b>kontrol edilir</b>. Bu süreçte kontrol edilecek örnekler ortaya çıkarılır.</li> <li>Çıkarılan donatı (<b>etriye ve boyuna donatı</b>) üzerindeki beton kalımlar ve pas, uygun boyutta marifetler yapılarak temizlenir.</li> <li>Donatı yapılan tespit edilir, dayanım testi için numune filiz başlandıdır. spirali kay marifet ile donatı çubuklar kesilir.</li> </ul> <div style="text-align: center;">  </div>
14 : 35	14 : 38	<ul style="list-style-type: none"> <li>It was stated that the tensile strength test will be applied to the samples taken.</li> <li>It was explained that the sample to be taken for the core test will be taken from the structural support. It has been explained that the durability of these samples will be measured by compressive strength tests.</li> </ul>

## Image 6 PRESENTATION FILE SHARED SECTIONS\_06



### YAPISAL FİZİBİLİTE

#### BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE

Donatı numuneleri; akredite laboratuvarlarda gelme dayanım testlerine tabi tutulur, kopma kuvvetleri belirlenir ve raporlanır.



### YAPISAL FİZİBİLİTE

#### BINA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSIZ MUAYENE

Kolon, kiriş nedir?

- **Kolon:** Sulu olarak da bilinen, taşıyıcı sistemde düşey yapı elemanlarına verilen isimdir. Yapıda diğ ve iç otkilerden oluşan kuvvetleri (moment, kesme kuvveti vb.) temellere, dolayla ile zemine aktarırlar.
- **Kiriş:** Yapılarda düşey ve kullanım alanı yüklerini düşey taşıyıcılara (kolon) aktaran yapı elemanıdır.



		<div data-bbox="741 256 792 309" data-label="Image"></div> <div data-bbox="801 288 936 311" data-label="Section-Header"><b>YAPISAL FİZİBİLİTE</b></div> <div data-bbox="1146 268 1240 288" data-label="Image"></div> <div data-bbox="801 314 1086 331" data-label="Section-Header"><b>BİNA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSİZ MUAYENE</b></div> <div data-bbox="801 336 913 352" data-label="Text">Numunelerin çıkarılması;</div> <div data-bbox="801 352 1176 454" data-label="List-Group"> <ul style="list-style-type: none"> <li>• Taşıcı beton koruculu için kolonlardan 10cm çapında 10cm derinliğinde, silindirik numunelerin çıkarılması;</li> <li>• Kesit makinesi, numune alınacak noktaya hedeflenerek uygun çapta ağız / vida kullanılarak sabitlenir;</li> <li>• Kesit makinesi çalıştırılır. Kullane arayan devirde dairesel ve işleni yapılan noktaya uygun miktarda su akıtarak delme işlemine başlanır.</li> <li>• 100-120mm derinliğe ulaşıldığında elbaze yatağı üzerinden kesici ucuz geti çekilir ve elbaze kapalı konuma getirilir;</li> <li>• Kesit makinesi üzerinden çıkarılır. Delgi boşluğuna uygun büyüklükte muş ve çakıcı kullanılarak numune köşeleri vurularak, numunenin bağları yüzeyinden kopması sağlanır. Serbest kalan numune yerinden çıkarılır.</li> </ul> </div> <div data-bbox="819 461 1180 534" data-label="Image"></div>
		<div data-bbox="741 555 792 608" data-label="Image"></div> <div data-bbox="801 600 936 622" data-label="Section-Header"><b>YAPISAL FİZİBİLİTE</b></div> <div data-bbox="1146 566 1240 587" data-label="Image"></div> <div data-bbox="801 627 1086 644" data-label="Section-Header"><b>BİNA TAŞIYICI YAPISI TAHRİBATLI / TAHRİBATSİZ MUAYENE</b></div> <div data-bbox="801 644 1164 671" data-label="Text">Beton numuneleri; alırdite laboratuvarlarda basma dayanım testlerine tabi tutulur, dayanıklılık seviyesi belirlenir ve raporlanır.</div> <div data-bbox="904 681 1097 818" data-label="Image"></div>
14 : 38	14 : 40	<ul style="list-style-type: none"> <li>It was stated that the samples were taken from places that were not exposed to force, the parts damaged by column stripping and the places where concrete samples were taken will be filled with high-strength filling mortars and repaired.</li> </ul> <p><b>Image 7 PRESENTATION FILE SHARED SECTIONS_07</b></p> <div data-bbox="741 1058 792 1110" data-label="Image"></div> <div data-bbox="801 1099 936 1121" data-label="Section-Header"><b>YAPISAL FİZİBİLİTE</b></div> <div data-bbox="1146 1069 1240 1090" data-label="Image"></div> <div data-bbox="801 1126 978 1144" data-label="Section-Header"><b>TAHRİBATLI TEST SONRASI ONARIM</b></div> <div data-bbox="801 1144 1126 1171" data-label="Text">Proje kapsamında gerçekleştirilen tahribatlı muayenelerin, kesin edilen numunelerin; binaya yapısal hasar vermesi söz konusu değildir.</div> <div data-bbox="801 1171 1158 1225" data-label="List-Group"> <ul style="list-style-type: none"> <li>• Demir numuneler kuvvet altında kalmayan fiiz uçlarından vb. noktalardan alınmaktadır.</li> <li>• Kolon sayması sonucu tahrip olan kesimler ve beton numunesi alınan bölümler yüksek mukavemetli dolgu harçları kullanılarak doldurulacak, onarılacaktır.</li> </ul> </div> <div data-bbox="824 1230 1151 1311" data-label="Image"></div>

14 : 40	14 : 45	<p>General explanations regarding occupational health and safety plans were made within this framework;</p> <ul style="list-style-type: none"><li>▪ Matters taken into account within the framework of OHS plans are explained item by item.</li><li>▪ It was underlined that only authorized persons can access the areas where the renovation works will be carried out, therefore, the access of the building users will be restricted in some periods. It was reminded that work plans should be evaluated within this framework.</li><li>▪ General OHS rules and precautions to be taken especially for environmental safety were mentioned.</li><li>▪ It was underlined that it should not be touched while working with the devices and that the technical personnel should show the plugs fed from the residual current circuit lines for the connection of electrical devices.</li><li>▪ The importance of professional competence was mentioned. For example; It has been stated that Civil Engineers and Construction Technicians will take part in construction equipment tests under their supervision.</li><li>▪ The environmental impacts of all works and the precautions to be taken are explained to all employees and the issues that stakeholders should pay attention to are explained.</li><li>▪ It was stated that the wastes will be cleaned by technical experts and employees and will be separated into the regions indicated by the Administration.</li><li>▪ Projected social impacts related to indoor observation, test and inspection activities are stated in the OHS plans.</li><li>▪ It has been underlined again that the samples to be taken will not adversely affect the building's structural aspects.</li></ul> <p><b>Image 8 PRESENTATION FILE SHARED SECTIONS_08</b></p>
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		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><b>İŞ SAĞLIĞI GÜVENLİĞİ</b></p> <p>Bina iş güvenliği, tesis ve müesseseler çalışmalarına ilişkin en önemli gerekliliklerdir, iş sağlığı ve güvenliği şartları, standartları ve yönetmelikleri dikkate alınmalıdır. Paydaşlarımızın bu konulara ilişkin fikir ve önerileri önemle değerlendirilmiştir.</p> <ul style="list-style-type: none"> <li>Genel iş güvenliği önlemleri, tesis ve müesseseler çalışmalarına ilişkin en önemli gerekliliklerdir, iş sağlığı ve güvenliği şartları, standartları ve yönetmelikleri dikkate alınmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> </ul> </div> <div style="width: 48%;"> <p><b>ÇEVRESEL ETKİLER</b></p> <p>Bina iş güvenliği, tesis ve müesseseler çalışmalarına ilişkin en önemli gerekliliklerdir, iş sağlığı ve güvenliği şartları, standartları ve yönetmelikleri dikkate alınmalıdır. Paydaşlarımızın bu konulara ilişkin fikir ve önerileri önemle değerlendirilmiştir.</p> <ul style="list-style-type: none"> <li>Genel iş güvenliği önlemleri, tesis ve müesseseler çalışmalarına ilişkin en önemli gerekliliklerdir, iş sağlığı ve güvenliği şartları, standartları ve yönetmelikleri dikkate alınmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> </ul> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 48%;"> <p><b>SOSYAL ETKİLER</b></p> <p>Bina iş güvenliği, tesis ve müesseseler çalışmalarına ilişkin en önemli gerekliliklerdir, iş sağlığı ve güvenliği şartları, standartları ve yönetmelikleri dikkate alınmalıdır. Paydaşlarımızın bu konulara ilişkin fikir ve önerileri önemle değerlendirilmiştir.</p> <ul style="list-style-type: none"> <li>Genel iş güvenliği önlemleri, tesis ve müesseseler çalışmalarına ilişkin en önemli gerekliliklerdir, iş sağlığı ve güvenliği şartları, standartları ve yönetmelikleri dikkate alınmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> <li>Çalışanların iş güvenliği eğitimleri düzenli olarak yapılmalıdır.</li> </ul> </div> <div style="width: 48%;"></div> </div>
14 : 45	14 : 50	<ul style="list-style-type: none"> <li>It has been stated that the OHS rules that the contractor companies must comply with and the general environmental and social effects/measures are explained in the OHS plan prepared specifically for this project and communicated to the relevant employees.</li> <li>In addition to the structural feasibility, it was stated that studies will be carried out on the <b>energy efficiency</b> of the buildings and various controls and examinations will be carried out in order to understand the current situation of the building before these.</li> </ul>

## Image 9 PRESENTATION FILE SHARED SECTIONS\_09

**Yüksek Performanslı Yenilerle Geleneksel Yapıların Güçlendirilmesi Konusunda İnceleme Raporu**

**Yüksek Performanslı Yenilerle Geleneksel Yapıların Güçlendirilmesi Konusunda İnceleme Raporu**

**Yüksek Performanslı Yenilerle Geleneksel Yapıların Güçlendirilmesi Konusunda İnceleme Raporu**

**ENERJİ VERİMLİLİĞİ**

**ENERJİ PERFORMANSINI ETKİLEYEN YAPI VE SİSTEMLERİN TEKNİKİ**

Birinci enerji performansını etkili şekilde etkileyen yapı ve sistemler aşağıda sıralanmıştır:

- Enerji tüketimi, yapıya bağlıdır (Isı, soğukluk ve ışık).
- Yapıya bağlıdır (Isı, soğukluk ve ışık).
- Yapıya bağlıdır (Isı, soğukluk ve ışık).
- Yapıya bağlıdır (Isı, soğukluk ve ışık).
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- Yapıya bağlıdır (Isı, soğukluk ve ışık).
- Yapıya bağlıdır (Isı, soğukluk ve ışık).
- Yapıya bağlıdır (Isı, soğukluk ve ışık).

**ENERJİ VERİMLİLİĞİ**

**ENERJİ PERFORMANSINI ETKİLEYEN YAPI VE SİSTEMLERİN TEKNİKİ**

Birinci enerji performansını etkili şekilde etkileyen yapı ve sistemler aşağıda sıralanmıştır:

- Enerji tüketimi, yapıya bağlıdır (Isı, soğukluk ve ışık).
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- Yapıya bağlıdır (Isı, soğukluk ve ışık).
- Yapıya bağlıdır (Isı, soğukluk ve ışık).

**ENERJİ VERİMLİLİĞİ**

**ENERJİ PERFORMANSINI ETKİLEYEN YAPI VE SİSTEMLERİN TEKNİKİ**

Birinci enerji performansını etkili şekilde etkileyen yapı ve sistemler aşağıda sıralanmıştır:

- Enerji tüketimi, yapıya bağlıdır (Isı, soğukluk ve ışık).
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- Yapıya bağlıdır (Isı, soğukluk ve ışık).

**ENERJİ VERİMLİLİĞİ**

**ENERJİ PERFORMANSINI ETKİLEYEN YAPI VE SİSTEMLERİN TEKNİKİ**

Birinci enerji performansını etkili şekilde etkileyen yapı ve sistemler aşağıda sıralanmıştır:

- Enerji tüketimi, yapıya bağlıdır (Isı, soğukluk ve ışık).
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- Yapıya bağlıdır (Isı, soğukluk ve ışık).
- Yapıya bağlıdır (Isı, soğukluk ve ışık).



**ENERJİ VERİMLİLİĞİ**

**ENERJİ PERFORMANSINI ETKİLEYEN YAPI VE SİSTEMLERİN TEKNİKİ**

Birinci enerji performansını etkili şekilde etkileyen yapı ve sistemler aşağıda sıralanmıştır:

- Enerji tüketimi, yapıya bağlıdır (Isı, soğukluk ve ışık).
- Yapıya bağlıdır (Isı, soğukluk ve ışık).
- Yapıya bağlıdır (Isı, soğukluk ve ışık).
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- Yapıya bağlıdır (Isı, soğukluk ve ışık).



		 <p><b>İŞ SAĞLIĞI GÜVENLİĞİ</b></p> <p>Hava temizliği performansını belirlemek için risk analizi gerçekleştirilmeye ve önlemler belirlenmeye çalışılmaktadır. Bunun yanında yapıya ilişkin bu cihazlardan dolayı diğer olumsuz etkilerden korunular sağlanacaktır.</p> <ul style="list-style-type: none"> <li>• Sağlık ve emniyet açısından işin yürütülmesi için gerekli sağlık ve emniyet önlemleri paydaşlar ile birlikte belirlenmiştir. Sağlık ve emniyet önlemleri ilgili mevzuat ve standartlar çerçevesinde gerçekleştirilecektir.</li> <li>• Çalışanların iş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır. İş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır.</li> <li>• İş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır. İş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır.</li> <li>• İş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır. İş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır.</li> <li>• İş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır. İş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır.</li> <li>• İş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır. İş yerinde sağlık ve emniyet önlemleri konusunda bilgilendirilmeye çalışılacaktır.</li> </ul>
14 : 50	14 : 54	 <p><b>ÇEVRESEL SOSYAL ETKİLER</b></p> <p>Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir. Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir.</p> <ul style="list-style-type: none"> <li>• Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir. Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir.</li> <li>• Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir. Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir.</li> <li>• Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir. Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir.</li> <li>• Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir. Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir.</li> <li>• Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir. Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir.</li> <li>• Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir. Çevre ve sosyal etkilerin değerlendirilmesi için yapılan toplantıda paydaşlarla birlikte değerlendirilmiştir.</li> </ul>
		<p>Clarifications were made regarding stakeholder engagement, receiving and evaluating suggestions and grievances, and informing the relevant parties about this process (decisions taken regarding suggestions and grievances, additional measures implemented, etc.)</p> <ul style="list-style-type: none"> <li>▪ It was explained that suggestions and grievances can be received via digital form, telephone, e-mail addresses and QR codes.</li> <li>▪ It was stated that suggestions and grievances can be conveyed by specifying the building name with the call line 181.</li> <li>▪ Printed feedback forms were introduced, information was given about the suggestion and complaint boxes to be established in the building, and the control periods.</li> <li>▪ It was announced that the grievances about gender-based violence (harassment, abuse, etc.) and gender-based discrimination, which were made within the scope of the project, will also be evaluated within the scope of the complaint resolution mechanism.</li> </ul>

		<p><b>Image 10 PRESENTATION FILE SHARED SECTIONS_10</b></p> <p><b>ÖNERİ ŞİKAYET SİSTEMİ</b> Öneri ve şikayetleriniz, soru ve sorunlarınız, mail sistemi aracılığıyla bizim için değerli olduğuna bilmeniz önemlidir. Genel işlere uygun olarak öneri ve şikayetlerinizden dolayı oluşan herhangi bir durumda hızlıca yanıtlanmaktadır. Sorularınıza hızlıca yanıtlanmaktadır. Öneri ve şikayetleriniz, hangi yöntemle yaparsanız (telefon, mail, anımsatı formu) ya da ne kadar hızlı bir şekilde yanıtlanmaktadır, bizim için değerli bilgilerdir. Sorularınıza hızlıca yanıtlanmaktadır.</p> <p>Bu proje hakkında genel bilgi almak, görüş ve sorularınızı bildirmek için <a href="mailto:iletisim@kadev.tmmob.gov.tr">iletisim@kadev.tmmob.gov.tr</a> web sayfasına ziyaret edebilirsiniz.</p> <p><b>ÖNERİ ŞİKAYET SİSTEMİ</b> Çarşı, Şehircilik ve Kimlik Bakanlığı (2016) Bina Verimliliği ve Enerji Etkinliği Birimi, Çarşı, Şehircilik ve Kimlik Bakanlığı, 06108 Sıhhiye, Ankara.</p> <p><b>ÖNERİ ŞİKAYET SİSTEMİ</b> İnternet üzerinden şikayet formuna temin edilen QR kodu kullanılarak yapılır.</p> <p><b>Image 11 PRESENTATION FILE SHARED SECTIONS_11</b></p> <p><b>T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI</b></p> <p><b>THE WORLD BANK</b></p> <p>İlgi ve anlayışınız için <b>teşekkür ederiz!</b></p>
14 : 54	15 : 00	<p>Participants' questions were received and answered.</p> <p>CLOSING speech was made and the meeting was ended.</p> <p><b>Image 11 PRESENTATION FILE SHARED SECTIONS_11</b></p> <p><b>T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI</b></p> <p><b>THE WORLD BANK</b></p> <p>İlgi ve anlayışınız için <b>teşekkür ederiz!</b></p>

## Participant List and Contact Information


Within the scope of the Law on the Protection of Personal Data Personal (Law No. 6698), participants' clear identity information cannot be shared. However, records of the meeting are kept by the PIU.



## Annex VII Stakeholder Engagement Meeting Content & Records (Environmental and Social Management Plan)

Project Code	WB/CS-DESSUP-01	Building Name	İSTANBUL TEKNİK UNIVERSITY AYAZAGA CAMPUS
Date	5.02.2024	Start   End Time	14 : 00   15 : 08

START TIME	END TIME	ACTIVITY
14 : 00	14 : 03	Meeting kick-off speech (Moderator Orhan Kenan Sülahi)
14 : 03	14 : 05	Within the framework of the Law on the Protection of Personal Data, general information was provided regarding the meeting recording and the processing of personal data. There are no participants who oppose the meeting recording. <ul style="list-style-type: none"><li>As of 14:05, the entire meeting was recorded in *.mp4 video format and *.m4a audio file format. In addition, meeting messages are recorded in *.txt format.</li></ul>
14 : 05	14 : 08	Information was given about the SREEPB project and its objectives. <b>Image 7 PRESENTATION FILE SHARED SECTIONS_01</b>

		 <p><b>KAMU BİNALARINDA DEPREM DAYANIMI &amp; ENERJİ VERİMLİLİĞİ PROJESİ</b></p> <p>Finansmanı Dünya Bankası tarafından sağlanmakta, Hazine &amp; Maliye Bakanlığı garantörlüğünde, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı tarafından yürütülmektedir.</p> <p><a href="https://kamuguclendirme.csb.gov.tr">https://kamuguclendirme.csb.gov.tr</a></p> <p><b>Kamu Binalarında Deprem Dayanımı ve Enerji Verimliliği (KADEV) Projesi</b>; yüksek sismik risk altında ve enerji verimliliği düşük yükseköğretim binaları, yurtlar, sosyal hizmet kurumları, hastaneler ve hükümet konakları gibi kamu binalarında sismik güçlendirme ve enerji verimliliğine odaklanmıştır.</p> <p>Bu sunum, <b>İTÜ Ayazağa Kampüsünde</b> yer alan <b>VADI BÖLÜMÜ</b> (23.317m<sup>2</sup>) yapısal güçlendirme ve enerji verimliliği odaklı iyileştirme çalışmalarını hakkında bilgi verecektir.</p>
14 : 15	14 : 20	<ul style="list-style-type: none"><li>The renovations to be carried out for the structural retrofitting identified as a result of the feasibility study have been explained in detail. (Structural system retrofitting, fine works, etc.)</li></ul>

## Image 8 PRESENTATION FILE SHARED SECTIONS\_02

**Yapım Aşaması**

Ekli metninde; yapısal güçlendirme ve enerji verimliliği odaklı renovasyonlar belirlenmiş ve projelendirilmiştir. Söz konusu renovasyonlar, aşağıda ana başlıklar halinde belirtilmiştir:

**Yapısal Güçlendirme**

- Mevcut yapıya sismik etkiyi azaltacak zemin iyileştirme
- Yapıya güçlendirme taşıyıcı sistem güçlendirme yapılmıştır.

01

**Enerji Verimliliği**

- Çatı yalıtım çalışmaları yapılmıştır.
- Duvar yalıtım çalışmaları yapılmıştır.
- İçerideki alanlar yalıtım çalışmaları yapılmıştır.
- Yalıtım çalışmaları için alan ayırma çalışmaları yapılmıştır.
- Mutfak alanlarında gaz tesisatı çalışmaları yapılmıştır.
- Kuvvetli rüzgar ve yağış koruma çalışmaları yapılmıştır.
- Çatı alanlarında güneş panelleri çalışmaları yapılmıştır.
- Enerji verimliliği için enerji verimliliği çalışmaları yapılmıştır.
- Mülkiyet devri sonrası yapılacak çalışmaları içermektedir.

**Yapısal Güçlendirme****Taşıyıcı Sistem Güçlendirme**

Güçlendirme perdesi ve kolon mantolama yapılacak alandaki duvarlar işaretlenerek en üst kattaki başlangıç seviyesinde, balyoz ve kırma marifetiyle yıkılacaktır. Duvar yıkımı öncesi zarar görmemiş siki barandranlar, kapı, pencere, vitrinler, tavanlar, elektrik ve mekanik tesisat ekipmanları sökülecektir ve faydalarını kurum tarafından gösterilen alanlara göçürte muhafaza edilecektir.

01

**Yapısal Güçlendirme****Taşıyıcı Sistem Güçlendirme**

Söküm işlemlerinden sonra güçlendirme elemanlarının temellere bağlanması amacıyla perde ve kolon mantosu çözümlenmiş çimento çakı ile betonun kırılması ve temel içi dolgu sununun kazılması gerekmektedir. Bu işlem ve kazı işlemleri el ile kırma ve balyoz yardımıyla ve/veya yapı yerlerine girilen küçük makinelerle (bucaklı vb.) gerçekleştirilecektir.








01




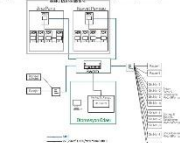


**Yapısal Güçlendirme****Taşıyıcı Sistem Güçlendirme**

Kırım ve kazı işlemleri tamamlandıktan sonra mevcut kolon, kiriş ve temellere ankraj çubukları çakılır. Ankraj çubukları beton projelendirildi ölçülere uygun olarak delik muhafazaları mevcut elemanlara delik açılışına, delişin hava kompresyonu ile temizlenmesi, tepesi yapılmış delik içlerine sıkılması ve önceden hazırlanan ankraj demirinin delik içlerine sokulması şeklinde yapılır.





01








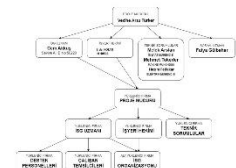


		<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p style="text-align: center;"> <b>Yapısal Güçlendirme</b></p> <p><b>Tapın Sistem Güçlendirme</b></p> <p>Ankara imalatın ile beraber güçlendirme donatılarının döşemesi işlerine başlanacaktır. Donatı numune kontrolleri sonrası Plywood kalıplar kapatılarak bir üst kat döşemesinden açılan delikten veya kış ağza da denilen kalıptan imal edilen huniler üzerinden kalıp içine "kendiliğinden yerleşen beton" (ince agregalı, süper akışkanlığına katkılı beton) dökülür.</p> <p style="text-align: center;">01</p>  </div> <div style="width: 48%;"> <p style="text-align: center;"> <b>Yapısal Güçlendirme</b></p> <p><b>İnce İşler</b></p> <p>Kalıp inşaatın tamamlanmasının ardından onarım işlerine geçilir. Güçlendirme perdelerinin iç ve dış yüzeylerinin sıva, boya, yalıtım vb. uygulamaları, bölümler zemine göre beton ve kaplama malzemesi düzenlemeleri, elektrik tesisatı ve mekanik tesisat montajları ve gerekirse kapı pencere imalatları yapılarak güçlendirme işleri tamamlanır.</p> <p style="text-align: center;">01</p>  </div> </div>
14 : 20	14 : 23	<ul style="list-style-type: none"> <li>▪ The renovations to be carried out for energy efficiency determined as a result of the survey are explained in detail. <ul style="list-style-type: none"> <li>▪ Solar Power Plants</li> <li>▪ Heating Center Renovation</li> <li>▪ Motor &amp; Pump Replacement</li> <li>▪ LED Conversion</li> <li>▪ Automation System</li> <li>▪ Facade Insulation</li> <li>▪ Terrace Roof Insulation</li> <li>▪ Exterior Door Replacement</li> </ul> </li> </ul> <p><b>Image 9 PRESENTATION FILE SHARED SECTIONS_03</b></p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p style="text-align: center;"> <b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p><b>Çatı Üzeri Güneş Enerji Santralleri</b></p> <p>VADI BÖLÜMÜ binası (B-C-D-E Bloklar Yurt binası ve Yemekhane binası) çatıları üzeri; 545Wp kapalı tip solar panelleri ile kaplanacaktır. (637 Ad. Panel   347,24W, Üretim Kapasitesi)</p> <p style="text-align: center;">02</p> <p>Yapılan hesaplamalar site konusunu sistemin yılda yaklaşık olarak 422.496,0 kWh/yıl (310 GWh) elektrik üretimi potansiyeli barındıracağını göstermektedir.</p> </div> <div style="width: 48%;"> <p style="text-align: center;"> <b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p><b>Isı Merkezi Renovasyonu</b></p> <p>Merkezi ısıtma sistemi yerine münferit ısı merkezleri tahsis önerilmektedir. C-D-E Bloklar ve Yemekhane binası özelinde yüksek verimli yağmalı premix brülörleri KASKAT sistemine dönüştürülecektir. C Blok, B Blok da benzer olacaktır. Kapalı Spor Salonu ısıtma ihtiyacı bu yenilenen Yemekhane ısı merkezinden karşılanacaktır. Vadi C Blok altyapı konularından dolayı damasız sıcak su sisteminin yeni kazan sistemine uygun olarak yeniden düzenlenmesi, her bina özelinde kullanım sıcak suyu plakalı eşanjörü ve akümülatörün tavli tesisi önerilmektedir. Bu suretle dışardan tüketilen yüksek verimli şekilde karşılanabilecektir. Tesisat yapı bu yenilemeye uygun biçimde yeniden tesisi edilecektir.</p> <p style="text-align: center;">02</p>  </div> </div>

		<p><b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p><b>Motor &amp; Pompa Değişimi</b></p> <p>Vadi Yemekhane binası tesisatında yer alan 4 adet klima ünitesinin genel baları işlemlerinin tamamlanması, Motor ve tahrik sisteminin IE4 sınıfı yüksek verimli motorlar, dijital kayıp kazanak sistemi ile değiştirilmesi ve her bir motora frekans kontrol ünitesi tesis edilecektir. Isıtma ve domestik sıcak su tesisatında kullanılan geleneksel motor &amp; pompaların tamamının IE4 sınıfı entegre frekans kontrollü motor/pompa sistemleri ile değiştirilecektir.</p> <p>Temiz su depo motorlarının ise (3 Adet 55kW 1Adet 18,5kW) yüksek verimli kuru rotorlu frekans kontrollü ilaemeleri ile değişimi (4 Adet 45kW)</p> 	<p><b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p><b>Termostatik Vana Tesisi</b></p> <p>Proje kapsamında bütün tüm yapıların odaföter peteklerinin besleme kısmına termostatik vana tesisi önerilmektedir.(B30A4.)</p> 
		<p><b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p><b>Aydınlatma Elemanları LED Dönüşümü</b></p> <p>Vadi Bölümü binaları (B-C-D-E Yurt Blokları ve Yemekhane binası) içindeki 2.569 adet aydınlatma elemanının tamamı, benzer aydınlatma jiddeti ve renk sıcaklığına sahip LED aydınlatma armatürleri ile değiştirilecektir.</p> 	<p><b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p><b>Otomasyon Sistemi</b></p> <p>Vadi Bölümü Binalarını: enerji ileme sistemi (ısıtma sistemi, domestik sıcak su ısıtma, sirkülasyon motor &amp; pompaları, güneş enerji kontrol) ve mekanik otomasyon sisteminin EN ISO 50001 Enerji Yönetim Sistem gerektiren uygun biçimde kurulması ve etkinliğinin sağlanması sureti ile toplam enerji tüketiminde ~%3 elektrik, ~%16,65 oranında doğalgaz tasarrufunda elde edilebileceği hesaplanmıştır.</p> 
		<p><b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p><b>Cephe Yalıtımı</b></p> <p>Vadi Bölümü binaların (B-C-D-E Blok ve Yemekhane binası) dış cephe kontrollörleri neticesinde; yapılan hesaplamaları yalıtım bakiyelerinde daha TS 825 şartlarını karşılamadığına görülmüştür. Bu çerçevede 10cm kalınlığında U80.035Wm-2K şartını sağlayan taş yünü cephe kaplama tesisi önerilmektedir.</p> 	<p><b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p><b>Teras Çatı Yalıtımı</b></p> <p>Yerinde yapılan inceleme neticesinde Vadi Bölümü binalarının (B-C-D-E Blok ve Yemekhane); çatıda yapılan hesaplamalar mevcut termal yalıtımın TS 825 şartlarını karşılamadığına ortaya çıkmaktadır. Bu çerçevede kullanılmayan kırma çata arası mevcut mineral kaplamaların sökülmesi ve yerine, bir yüzü alüminyum folyo kaplı çamurlu çatı iltis (25cm kalınlıkta, 0,035 s al iletkenliği &lt; 0,040W/(m.K) olan) serilmesi ve Vadi Yemekhane binasında kullanılan teras zemini ise 10cm çap termal yalıtım tesisi önerilmektedir.</p> 



		<div style="text-align: center;">   </div> <p style="text-align: center;"><b>02</b></p> <p style="text-align: center;"><b>Enerji Verimliliği Odaklı Çalışmalar</b></p> <p>Yapılan hesaplamalar neticesinde Vadi Bölümü (B-C-D-E Yurt Blokları, Yemeğe ve Spor Salonu) özelinde belirlenen ölçüm senaryolarının hayata geçirilmesi ile toplam enerji tüketiminde %55,50' oranında tasarruf elde edilebilecek, yaklaşık <b>825,64 ton/yıl sera gazı emisyonu engellenebilecektir</b>. Söz konusu renovasyonlar ve yenilenen sistemlerin EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde işletilmesi ile yıllık <b>673.332,00 kWh elektrik, 2.263.126,12 kWh doğalgaz</b> tasarrufu sağlanabilecektir. Söz konusu tasarrufun maddi boyutu yaklaşık 5.366.040,02 €/yıl seviyesindedir.</p>
14 : 23	14 : 26	<p>General statements regarding occupational health and safety plans were made within this framework;</p> <ul style="list-style-type: none"> <li>The issues taken into account within the framework of OHS plans were explained item by item.</li> <li>It was underlined that only authorized individuals will be able to access the areas where renovation works will be carried out, and therefore the access of building users will be restricted in some periods. It was reminded that work plans should be evaluated within this framework.</li> <li>General OHS rules and especially the measures to be taken for environmental safety were mentioned.</li> <li>The environmental impacts of all studies and the precautions to be taken were conveyed to all employees and the issues that stakeholders should pay attention to were explained.</li> </ul> <p><b>Image 10 PRESENTATION FILE SHARED SECTIONS_04</b></p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p><b>İş Sağlığı &amp; Güvenliği</b></p> <p>Yapım sürecine ilişkin iş sağlığı ve güvenliği planları hazırlanmıştır. <b>Yüklenici firmamız:</b></p> <ul style="list-style-type: none"> <li>Tarofirma hazırlanan İŞ SAĞLIĞI GÜVENLİĞİ PLANI doğrultusunda, sorumlu olduğu bütün çalışmaları kapsar mahiyette İŞ SAĞLIĞI GÜVENLİĞİ PLANI ve Risk Analizini hazırlaması ve Müşavir onayına sunması zorunludur. Ancak söz konusu plan, analizlerin uygun görülmesi sonrasında çalışmalar başlayacaktır.</li> </ul> <p>Paydaşlarımızın bu çalışmalara ilişkin dikkat etmeleri gereken konular şunlardır:</p> <ul style="list-style-type: none"> <li>Mobil vinç, kompresör vb. iş makinelerinin tamamının periyodik imyane raporlarının termin edilmiş olması ve makinelerin içinde hazır bulundurulması zorunludur. Söz konusu makineler, yetkili operatörler tarafından kullanılabilir. Operatörler yetkili belgelerini hazır bulundurulmalı ve sahaya kontrolleri, denetimleri konusunda yetkili İSG uzmanlarının talepleri doğrultusunda beyan edilmelidir.</li> </ul> </div> <div style="width: 45%;">  <p><b>İş Sağlığı &amp; Güvenliği</b></p> <ul style="list-style-type: none"> <li>Sahada kullanılan her türlü elektrikli cihaz/akıllı araçların elektrik şahtan güvenli çıkışı/güvenli girişi PAT testleri yapılması zorunludur. Söz konusu ekipmanların tamamında ihtiyaç görüldüğünde uygun ölçümler yapılmalıdır.</li> <li>Ancak uygun Meslek Yeterlik Belgeleri ve iş güvenliği uzmanları tarafından verilmelidir.</li> <li>Bütün çalışanlar, genel olarak çevrelerinde uygun kişisel koruyucu ekipmanlara sahip olmalı ve etkin olarak kullanmalıdır.</li> <li>Bütün çalışanlar, «Temel İSG Eğitimi», «Risk Analizi Eğitimi» almış olmalıdır.</li> <li>Yüksekte çalışacak personellerin «Yüksekte Çalışma Eğitimi» almış olması zorunludur.</li> <li>Bütün çalışanlar «EKİD - Enerji Kilitleme Emniyeti Al Deme Eğitimi» almış olmalıdır.</li> <li>Çalışanların İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirtilen diğer iş güvenliği uzmanları ile görüşülmesi gerekmektedir.</li> <li>İş iskelelerinin TS EN 12813-1 standardı şartlarını karşılaması esastır. Söz konusu iş iskelelerinde çalışacak bütün personelin yüksekte çalışma eğitimi almış olması, parşüt tipi emniyet kemeri ve diğer emniyetli ekipmanların kullanılması zorunludur.</li> <li>Kompozitlerde İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirtilen «TRAFFİK PLANI»na uygun hareket etmelidir.</li> <li>Yüklenici firma, bu çalışma sahada özellikle acil durum eylem planları geliştirmeli ve bütün çalışanları kapsar mahiyette tabakalar gerekebilecektir.</li> </ul> </div> </div>

		 <h3>İş Sağlığı Güvenliği</h3> <p>Çalışanların tamamını İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirlenen kişisel koruyucu donanımları değiştirilerek kullanmaya yüklenmektedir. Söz konusu donanımları uygun şekilde taşımayı/kullanmayı/parçalarını çalışmaları için verilmeyecektir.</p> <p>Örnek kişisel koruyucu donanımlar:</p> <ul style="list-style-type: none"> <li>• Baret - TS EN 397+A1</li> <li>• Kask - TKS - TS EN 1352-2</li> <li>• Konuşucu Gözlük - TS EN ISO 16321-3</li> <li>• Genel Amaçlı Eldiveni - TS EN ISO 21420</li> <li>• İş Ayakkabısı - TS EN ISO 20347</li> <li>• Yarım Yüz Maskesi - TS EN 140</li> <li>• Parayüt Tipi Emniyet Kemeri - TS EN 361 (Sadece yükseklik çalışan personelleri)</li> </ul>   <h3>İş Sağlığı Güvenliği</h3> <ul style="list-style-type: none"> <li>• Acil durumlarda çalışanların toplanacağı bölgeler, deprem riski de dikkate alınarak belirlenmiş vaziyet planlarında gösterilmiştir.</li> </ul> 
14 : 26	14 : 28	<ul style="list-style-type: none"> <li>Information was given about the traffic action plan.</li> <li>Health &amp; Safety Organization was explained.</li> </ul> <p><b>Image 11 PRESENTATION FILE SHARED SECTIONS_05</b></p>  <h3>Trafik Eylem Planı</h3> <ul style="list-style-type: none"> <li>• Kampos için araç kullanımlarına ilişkin sınırları İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirtmiştir.</li> </ul>   <h3>Sağlık &amp; Güvenlik Organizasyonu</h3> 
14 : 28	14 : 32	<ul style="list-style-type: none"> <li>The environmental impacts of the work to be carried out are explained.</li> </ul>

## Image 12 PRESENTATION FILE SHARED SECTIONS\_06

**Çevresel Etkiler**

Proje sahada RTÜ **Ayazda Kampüsü alanı** içerisinde. Kampüs dışında yer alan diğer binaların ıspat süreçlerinden **duşudan etkilenmeleri** söz konusu değildir. Faaliyet alanı çevresi aşağıda gösterilmiştir.

**Çevresel Etkiler**

Proje kapsamında; Müşavirin, Yüklenici firma personellerine vereceği eğitimler konusunda, yüklenici firmamız kurumsal kapasitesini geliştirme beklentimizdir. Bu eğitimler aşağıda listelenmiştir.



- Çevresel ve Sosyal Etkiler
- Atık Yönetimi
- Çevresel Acil Durumlara Tepki
- Enerji Verimliliği
- Şikayet Mekanizması (SM)

**Çevresel Etkiler****Atık Yönetimi****Tehlikeli Atıklar:**

- Sahiye sahasında oluşmuş multimedya **tehdikeli kimyasal madde ve atıkların** çevre çözümlü ve iklim değişikliği Bakanlığı çevrimçi programı **Entegre Çevre Bilgi Sistemi (E-ÇBS)** üzerinden atık yönetimi uygulanması kullanılarak **isimli bertaraf** tesislerine gönderilecektir.
- Çalışma sahasında **dükümlü azami emici peöl itidleri** hazır bulundurulacaktır. Görevli bütün personeller **tehlikeli kimyasal maddeler ve dükümlerine ilişkin koruma ve acil durum eğitimine** tabi tutulacaktır.
- Orta ve büyük ölçekli çevresel kazaların oluşması halinde, bina arız firması yapılacak ve raporlanacaktır.
- Tadilat/ıspat çalışmaları sırasında sökülen kullanimis **fosforun lambalar** nihai tesiste bertaraf edilecektir. Malzeme taşıması ve bertarafına ilişkin gerekli bilgiler, ıspat partiyesinde yapılacak veritabanı ÇEDB ve Dünya Bankası/naibraz edilecektir.

**Çevresel Etkiler**

İnşaat çalışmaları sırasında, bölgede halihazırda mevcut olan kanalizasyon, elektrik ve su şebekeleri kullanılacaktır.



Feset atıkları, belediye hizmetlerinden faydalanılarak bertaraf edilecek, diğer atıklar için ise geçici depolama alanları oluşturulmuş kiralı firmalara bertarafın yapılması sağlanacaktır. Proje önlemleri herhangi bir altyapı hizmet alımı gerektirmez durumda (kanalizasyon hatlarında tıkanma sonucu yağma (Yıldırım) hizmet alımı, suun süreli elektrik kesintisi (mobil jeneratör), suyun sürekli su besletir (su tankeri ile tozla mücadele vb.) mevcut atıkları imkânları (jeneratör vb.) değerlendirilecek ve ilgili yönetmeliklere uygun olarak gerçekleştirilecektir.

**Çevresel Etkiler****Atık Yönetimi****İnşaat, Hafriyat Atıkları:**





- Sıkımlı faaliyetleri sonucunda binaya ait zeminde malzeme oluşması durumunda bina yönetimine çözümler matrisinin **teslim edilmesi** talep edilecektir.
- İnşaat/ıspat atıklarının kaınması ve **isimli** alt yapı malzemesi olarak yeniden değerlendirilmesi öncelikli olarak ele alınacaktır. Hafriyat atıkları ilgili belediyenin atık depolama tesisine gönderilecektir. Atıkların sahaya kabul edilme@me dair Belediyesinden resmi yazı alınarak idareye sunulacaktır.



**Çevresel Etkiler****Atık Yönetimi****Esvel Atıklar:**

- Oluşacak evsel nitelikli atıklar kaynağında ayrıştırılarak (plastik, cam, kağıt, vb.) ve değerlendirilebilir olanların geri dönüşümü sağlanacaktır. Atıkların uygun biçimde **ayrıştırılması** için çalışanlara **egitim** verilecektir.
- Geri kazanımı mümkün olmayan atıklar, ağır kapalı silihi çöp binalarında biriktirilecek, Yetkili Belediyenin kati atık toplama sistemi aracılığıyla düzenli depolama sahalama gönderilecektir.

**Ambalaj Atıkları:**

- **Kontamine** olmaması **geri dönüşürülebilir** atıkların (*plastik, cam, kağıt, vb.*) geri dönüşümü sağlanacaktır. Atıkların uygun biçimde ayrıştırılması için çalışanlara **egitim** verilecektir.
- Tehlikeli maddeler ile kontamine olmuş atıkların tamamı, **tehlikeli atık statüsünde** değerlendirilecektir.

14 : 32	14 : 34	<ul style="list-style-type: none"> <li>It has been announced that the works will not adversely affect the building strength.</li> <li>It has been stated that work areas should not be approached.</li> </ul> <p><b>Image 7 PRESENTATION FILE SHARED SECTIONS_07</b></p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p><b>Sosyal Etkiler</b> Paydaşlarımıza aktarmak istediğimiz hususlar şunlardır;</p> <ul style="list-style-type: none"> <li>Site konusu çalışmaların <a href="#">hisa dayanımını olumsuz etkilemesi</a> söz konusu değildir.</li> <li>Güçlendirme ve renovasyon çalışmaları kapsamında, kullanıcı ve diğer paydaşların çalışma alanlarına yaklaşmalarını hususunda yapılan uyarılar dikkate alınarak destek verilmeye çalışılacaktır.</li> <li>Güçlendirme ve Renovasyon çalışmalarını süresiz çalışma safhalarında gerekli düzenlemeleri, görevli personeller tarafından gerçekleştirilecektir. Bu konuya ilişkin şikayetleriniz kabinimize bildiriniz.</li> <li>Proje görev alanı çalışanları, her bir kısıt altında paydaşları ile tartışılmaması hususunda gerekli uyarılar yapılacaktır. Böylece durumu karşılıklı olarak bildirebilir ve şikayet mesajlarımızı sosyal medya üzerinden bekliyoruz. (Öneri &amp; şikayet süreci)</li> <li>Bütün çalışmalar ayrıntılı, deneyim temelli şiddet konusunda bilgilendirilecektir ve proje kapsamında bu tip davranışlara hiçbir şekilde yer verilmeyeceği bildirilir. Bu çalışmaları ayarlanarak desteklenerek, projede görev almış veya da görevleri in devamını devam ettirmiş olanlar için olacaktır.</li> </ul> </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;">  <p><b>Sosyal Etkiler</b> Proje kapsamında, Müşavirin Yürütücü personeli ne vereceği eğitimler sonucunda yüklenici firmamızın kurumsal kapasitesinin gelişmesi beklenmektedir. Bu eğitimler aşağıda listelenmiştir.</p> <ul style="list-style-type: none"> <li>Çevresel ve Sosyal Etkiler</li> <li>Paydaş Katılımı/Bilgilendirme Faaliyetleri</li> <li>Şikayet Mekanizması (SM)</li> <li>Cinsiyet Eğiği @ / Cinsiyet Temelli Şiddet/Cinsel Sömürü/Cinsel Saldırı/Cinsel Taciz</li> <li>Durum Kayıtları</li> <li>Tarifi Müzakere Konuşması</li> </ul> </div> <div style="text-align: center;">  </div> </div>
14 : 34	14 : 36	<ul style="list-style-type: none"> <li>OHS rules and general environmental social impacts/measures that contractor companies must comply with; It was stated that it was explained in the OHS plan prepared specifically for this project and communicated to the relevant employees.</li> </ul> <p><b>Image 8 PRESENTATION FILE SHARED SECTIONS_08</b></p>

		
<p>14 : 36</p>	<p>14 : 41</p>	<p>Clarifications were made regarding stakeholder engagement, receiving and evaluating suggestions and grievances, and informing the relevant parties about this process (decisions taken regarding suggestions and grievances, additional measures implemented, etc.)</p> <ul style="list-style-type: none"> <li>It was explained that suggestions and grievances can be received via digital form, telephone, e-mail addresses and QR codes.</li> <li>It was stated that suggestions and grievances can be conveyed by specifying the building name with the call line 181.</li> <li>Printed feedback forms were introduced, information was given about the suggestion and grievance boxes to be established in the building, and the control periods.</li> <li>It was announced that the grievances about gender-based violence (harassment, abuse, etc.) and gender-based discrimination, which were made within the scope of the project, will also be evaluated within the scope of the grievance resolution mechanism.</li> </ul> <p><b>Image 9 PRESENTATION FILE SHARED SECTIONS_09</b></p> 
<p>14 : 41</p>	<p>15 : 08</p>	<p>Participants' questions were received and answered.</p> <p>CLOSING speech was made and the meeting was ended.</p>



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## Questions and Answers

Table 3 QUESTIONS & ANSWERS LIST

	NAME SURNAME	QUESTION	NAME SURNAME	ANSWER
01	Participant 1	We take the scrapyards to where the boiler room is. Where will fluorescent waste go?	Ganime Güzel	It was said that it would be kept for a short time and sent to a licensed company within 6 months. It has been stated that the contractor can use the scrapyard, subject to their approval.
02	Participant 2	Can the energy produced be done on an off grid system?	Orhan Kenan Sülahi	The issue has been answered by the legislation of the Local Distribution Company and institutions such as TEİAŞ and EÜAŞ.
03	Participant 3	How will we progress with automation?	Orhan Kenan Sülahi	Details were given that the automation will be divided into two, that the first heating system will have its own monitoring automation, and that the smart system into which the second heating system is integrated will be a monitorable and recordable automation system.
04	Participant 4	How will the fixtures change?	Orhan Kenan Sülahi	It has been stated that by sticking to the current lighting parameters and comparing the efficiencies of the improved scenario with the current situation, the current luminaires will be changed, and this subjective change will be made.



05	Participant 5	Who makes the material selections?	Emre İlbey	It was said that approval would be obtained from the beneficiary institution and the project could be shared if they wish.
06	Participant 6	Is our calendar clear? When will it start, when will it end? Will all buildings need to be evacuated?	Emre İlbey, Orhan Kenan Sülahi, Tülin Yıldırım, Dicle Maybek	It was stated that care was taken to complete the project as soon as possible, that the project would start as soon as possible, that there were a lot of plans and paperwork, and that it would be discussed again after the work schedule was determined. It has been said that the process depends on the progress of the contractor. It was stated that when it comes to the construction phase, all dormitories will be evacuated at the same time, it is desired to be completed quickly, and after the new ESMP is shared, a tender will be held within 1 month at the earliest. It was said that they should publish the posted ESMP on their website as soon as possible.
07	Participant 7	Will the pipes be renewed?	Orhan Kenan Sülahi	It is stated that measurements will be made and action will be taken according to the range within which they are found.
08	Participant 8	It has been stated that the current installation is 15-20 years old and if everything is renewed, the pipes will not be able to handle it.	Orhan Kenan Sülahi	Projects have been developed in line with the necessary measurements and it has been stated that progress has been made in the light of the technical specifications.
09	Participant 9	Will solar power plant be installed on current roofs?	Orhan Kenan Sülahi	It has been said that roof studies are out of scope.
10	Participant 10	What will happen to the furniture in the dormitories?	Orhan Kenan Sülahi	It has been said that it can be specified in the technical specifications.
11	Participant 11	What to do if problems arise after the work is completed?	Orhan Kenan Sülahi	It was said that there is a defect liability process and that the solution process can be initiated by reporting it through the official channel.









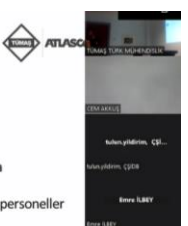


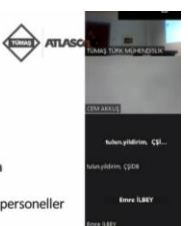
### Table 3 MEETING NOTES & GENERAL EVALUATION

- The brochures and appendix presentation files prepared within the framework of the SREEPB project will be sent to all participants via their mobile phones or e-mail addresses.
- Suggestion & grievance form link will be sent to all participants via their mobile phones or e-mail addresses.





Table 8 MEETING VISUALS

 <h2>İş Sağlığı &amp; Güvenliği</h2> <p>Yapım sürecine ilişkin, <u>iş sağlığı ve güvenliği planları</u> hazırlanmıştır. <b>Yüklenici firmanın;</b></p> <ul style="list-style-type: none"> <li>Tarafımızca hazırlanan İŞ SAĞLIĞI GÜVENLİĞİ PLANI doğrultusunda, sorumlu olduğu bütün çalışmaları kapsar mahiyette İŞ SAĞLIĞI GÜVENLİĞİ PLANI ve Risk Analizini hazırlaması ve Müşavir onayına sunması zorunludur. Ancak söz konusu plan, analizlerin uygun görülmesi sonrasında çalışmalar başlayacaktır.</li> </ul> <p>Paydaşlarımızın bu çalışmalara ilişkin dikkat etmeleri gereken konular şunlardır:</p> <ul style="list-style-type: none"> <li>Mobil vinç, kompresör vb. iş makinelerinin tamamının periyodik muayene raporlarının temin edilmiş olması ve makineler içinde hazır bulundurulması zorunludur. Söz konusu makineler, yetkili operatörler tarafından kullanılabilir. Operatörler yetki belgelerini hazır bulundurmalı ve saha kontrolleri, denetimleri esnasında yetkili İSG uzmanlarının talepleri doğrultusunda beyan edebilmelidir.</li> </ul>  	 <h2>Yapısal Güçlendirme</h2> <h3>İnce İşler</h3> <p>Kaba inşaatın tamamlanmasının ardından onarım işlerine geçilir. Güçlendirme perdelerinin iç ve dış yüzeylerinin sıva, boya, yalıtım vb. uygulamaları, bozulan zeminlere tesviye betonu ve kaplama malzemelerinin düzenlemeleri, elektrik tesisatı ve mekanik tesisat montajları ve gerekiyorsa kapı pencere imalatları yapılarak güçlendirme işleri tamamlanır.</p>  
 <h2>Sosyal Etkiler</h2> <p>Paydaşlarımıza aktarmak istediğimiz hususlar şunlardır;</p> <ul style="list-style-type: none"> <li>Söz konusu çalışmaların, <u>bina dayanımını olumsuz etkilemesi</u> söz konusu değildir.</li> <li>Güçlendirme ve renovasyon çalışmalarını esnasında, kullanıcı ve diğer paydaşların çalışma sahaslarına yaklaşmalarını hususunda yapılan uyarıları dikkate alarak destek vermenizi rica ediyoruz.</li> <li>Güçlendirme ve Renovasyon çalışmalarını sonrası; çalışma sahaslarında gerekli düzenlemeler, görevli personel tarafından gerçekleştirilecektir. Bu konuya ilişkin şikayetlerinizi lütfen bize bildirin.</li> <li>Projede görev alan çalışanları, hiç bir koşul altında paydaşlar ile tartışması hususunda gerekli uyarılar yapılacaktır. Böyle bir durumla karşılaşılması halinde öneri ve şikayet mekanizmaları vasıtasıyla bizlere ulaşmanızı bekliyoruz. (Öneri &amp; şikayet süreci)</li> <li>Bütün çalışanlar ayrımcılık, cinsiyet temelli şiddet konusunda bilgilendirilecektir ve proje kapsamında bu tip davranışlara hiçbir şart ve koşul altında izin verilmeyeceği bildirilmiştir. Bu yaklaşıma aykırı hareket edenleri, projede görev almasına ya da görevlerinin devamlılığına müsaade edilmeyecektir.</li> </ul>  	 <h2>Sosyal Etkiler</h2> <p>Paydaşlarımıza aktarmak istediğimiz hususlar şunlardır;</p> <ul style="list-style-type: none"> <li>Söz konusu çalışmaların, <u>bina dayanımını olumsuz etkilemesi</u> söz konusu değildir.</li> <li>Güçlendirme ve renovasyon çalışmalarını esnasında, kullanıcı ve diğer paydaşların çalışma sahaslarına yaklaşmalarını hususunda yapılan uyarıları dikkate alarak destek vermenizi rica ediyoruz.</li> <li>Güçlendirme ve Renovasyon çalışmalarını sonrası; çalışma sahaslarında gerekli düzenlemeler, görevli personel tarafından gerçekleştirilecektir. Bu konuya ilişkin şikayetlerinizi lütfen bize bildirin.</li> <li>Projede görev alan çalışanları, hiç bir koşul altında paydaşlar ile tartışması hususunda gerekli uyarılar yapılacaktır. Böyle bir durumla karşılaşılması halinde öneri ve şikayet mekanizmaları vasıtasıyla bizlere ulaşmanızı bekliyoruz. (Öneri &amp; şikayet süreci)</li> <li>Bütün çalışanlar ayrımcılık, cinsiyet temelli şiddet konusunda bilgilendirilecektir ve proje kapsamında bu tip davranışlara hiçbir şart ve koşul altında izin verilmeyeceği bildirilmiştir. Bu yaklaşıma aykırı hareket edenleri, projede görev almasına ya da görevlerinin devamlılığına müsaade edilmeyecektir.</li> </ul>  

## Participant List and Contact Information

**Table 9 Participant List and Contact Information**

Within the scope of the Law on the Protection of Personal Data Personal (Law No. 6698), participants' clear identity information cannot be shared. However, records of the meeting are kept by the PIU.

### PROJECT IMPLEMENTATION UNIT PARTICIPANTS

- 1) Serkan Narin (Branch Manager)
- 2) Emre İlbey (Civil Engineer)
- 3) Ganime Güzel (Environmental Expert)
- 4) Semahat Dicle Maybek (Social Expert)
- 5) Tülün Yıldırım (OHS Specialist)
- 6) Ozan Demirel (Project Implementation Unit Construction Specialist)
- 7) Zeynep Ünsal (MSc Civil Engineer)
- 8) Giray Şamil Yıldırım (MSc Civil Engineer)
- 9) Berna Çetinkaya (Project Assistant)
- 10) Bedri Özdemir (Social Expert)

Explanation: The stakeholder engagement meeting was held on the digital platform ( <https://meet.google.com/qhy-mqzb-ers> ) Video recording was made with the information and approval of the participants.

## Stakeholder Engagement Meeting Presentation

KAMU BİNALARINDA DEPREM  
DAYANIMI & ENERJİ VERİMLİLİĞİ  
PROJESİ

Finansmanı Dünya Bankası tarafından sağlanmakta, Hazine & Maliye Bakanlığı garantörlüğünde, Çevre, Şehircilik ve İklim Değişikliği Bakanlığı tarafından yürütülmektedir.



<https://kamuguclendirme.csb.gov.tr>



Kamu Binalarında Deprem Dayanımı ve Enerji Verimliliği (KADEV) Projesi; yüksek sismik risk altında ve enerji verimliliği düşük yükseköğretim binaları, yurtlar, sosyal hizmet kurumları, hastaneler ve hükümet konakları gibi kamu binalarında sismik güçlendirme ve enerji verimliliğine odaklanmıştır.

Bu sunum; İTÜ Ayazağa Kampüsünde yer alan **VADİ BÖLÜMÜ** (23.317m<sup>2</sup>) yapısal güçlendirme ve enerji verimliliği odaklı iyileştirme çalışmaları hakkında bilgi verecektir.



## Yapım Aşaması

Etüt neticesinde; yapısal güçlendirme ve enerji verimliliği odaklı renovasyonlar belirlenmiş ve projelendirilmiştir. 50c konusunu renovasyonlar, aşağıda ana başlıklar halinde belirtilmiştir:

## Yapısal Güçlendirme

- Yapısal güçlendirme çalışmaları, eksovestrasyon metoduyla
- Yapısal güçlendirme çalışmaları, eksovestrasyon metoduyla

## Enerji Verimliliği

- Cephe yalıtım çalışmaları
- Kısıtlı ısıtma
- Sıhhi tesisat sistemleri iyileştirme
- Yalıtımlı pencere ve kapılar
- Yalıtımlı kapılar ve pencereler
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01



## Yapısal Güçlendirme

## Taşıyıcı Sistem Güçlendirme

Güçlendirme perdeleri ve kolon mantolmaları yapılacak akslardaki duvarlar işaretlenen en üst kattaki taşınacak şekilde; balyoz ve kırma marfetle yıkılacaktır. Duvar yıkımı öncesi zarar görme riski barındıran; kapı, pencere, vitrifiye, tozalı, elektrik ve mekanik tesisat ekipmanları sökülmektedir ve Faydalanıcı kurum tarafından gösterilen alanlarda geçici muhafaza edilecektir.

01



## Yapısal Güçlendirme

## Taşıyıcı Sistem Güçlendirme

Söküm işlemlerinin sonra güçlendirme elemanlarının temellere başlaması amacıyla perde ve kolon mantolması çözümlerini açılması için zıssızan betonun kırılması ve temel içi dolgunun kazılması gerekmektedir. Bu kırma ve kazı işlemleri el ile (kırıma balyoz yardımıyla) ve/veya yapı işçisine girilecek küçük makinelerle (bobcat vb.) gerçekleştirilecektir.

01



## Yapısal Güçlendirme

## Taşıyıcı Sistem Güçlendirme

Kırım ve kazı işlemleri tamamlandıktan sonra mevcut kolon, kiriş ve temellere ankraj çubukları çakılır. Ankraj delikleri detay projelerindeki ölçülere uygun olarak delici matkaplarla mevcut elemanlara delik açılması, deliğin hava kompresörü ile temizlenmesi, epoksi yapıştırıcının delik içine sıkılması ve önceden hazırlanan ankraj demirinin delik içine sokulması şeklinde yapılır.

01



## Yapısal Güçlendirme

## Taşıyıcı Sistem Güçlendirme

Ankraj imalatları ile beraber güçlendirme donatısının döşenmesi işlerine başlanacaktır. Donatı numune kontrolleri sonrası Plywood kalıplar kapatılarak bir kat döşemesinden açılan delikten veya kuyudan taşınan kalıptan imal edilen huniler içersinden kalıp içi altına "kendiliğinden yerleşen beton" (in-situ agregat, süper akıcı kısıtlı beton) dökülür.

01



## Yapısal Güçlendirme

## İnce İşler

Kaba inşaatın tamamlandıktan sonra inşaat işlerine geçilir. Güçlendirme perdelерinin iç ve dış yüzlerinin sıva, boya, yalıtım vb. uygulamaları, bazıları zeminlere tesviye betonu ve kaplama malzemesi düzenlemeleri, elektrik tesisat ve mekanik tesisat montajları ve gerekirse kapı pencere imalatları yapılarak güçlendirme işleri tamamlanır.

01



**Enerji Verimliliği Odaklı Çalışmalar****Çatı Üzeri Güneş Enerji Santralleri**

VADI BÖLÜMÜ binaları (B-C-D-E Bloklar Yurt binaları ve Yemekhane binaları) çatılar üzerinde 5455Wp kapasiteli solar panellerle kaplanacaktır. (637 Ad. Panel | 347,2KW, Üretim Kapasitesi)

02

Yapılan hesaplamalar site konusunu sistemin yılda yaklaşık olarak 422.496,0 kWh/yıl (310 GWh) elektrik üretimi potansiyeli barındıracağını göstermektedir.

**Enerji Verimliliği Odaklı Çalışmalar****Isı Merkezi Renovasyonu**

Merkezi ısıtma sistemi yerine merkezi ısı tahsisli sistem önerilmektedir, C-D-E Bloklar ve Yemekhane binaları özelinde yüksek verimli yağmalı premix brülörlü KASIMAT sistemine dönüştürülecektir. C blok, B bloku da böylece olacaktır. Kapalı Spor Salonu ısıtma ihtiyacı ise yenilenen Yemekhane ısı merkezinden karşılanacaktır. Vadi C blok altında konumlandırılan domestik sıcak su sisteminin, yeni kazan sistemine uygun olarak yeniden düzenlenmesi, her bina özelinde kullanım sıcak suyu plakalı eşanjörü ve akümülayon tankı tesisi önerilmektedir. Bu suretle değişen talepler yüksek verimli şekilde karşılanabilecektir. Tesiat yapısı bu yenilenmeye uygun biçimde yeniden tesisi edilecektir.

02

**Enerji Verimliliği Odaklı Çalışmalar****Motor & Pompa Değişimi**

Vadi Yemekhane binası tesisatında yer alan 4 adet klima ünitesinin genel bakım işlemlerinin tamamlanması, Motor ve tahrik sisteminin IE4 sınıfı yüksek verimli motorlar, diğ. kayış kasnak sistemi ile değiştirilmesi ve her bir motora frekans kontrol ünitesi tesisi edilecektir. Isıtma ve domestik sıcak su tesisatında kullanılan geleneksel motor & pompaların tamamının IE4 sınıfı ertegre frekans kontrollü motor/pompa sistemleri ile değiştirilecektir. Temiz su depo motorlarının ise (3 Adet: 55KW, 1Adet: 18,5KW) yüksek verimli kuru rotorlu frekans kontrollü kameralı ile değişimi) (4 Adet: 45KW)

02

Temiz su depo motorlarının ise (3 Adet: 55KW, 1Adet: 18,5KW) yüksek verimli kuru rotorlu frekans kontrollü kameralı ile değişimi) (4 Adet: 45KW)

**Enerji Verimliliği Odaklı Çalışmalar****Termostatik Vana Tesisi**

Proje kapsamına giren tüm yapıların radyatör petaklerinin besleme karmına termostatik vana tesisi önerilmektedir. (930Ad.)

02

**Enerji Verimliliği Odaklı Çalışmalar****Aydınlatma Elemanları LED Dönüşümü**

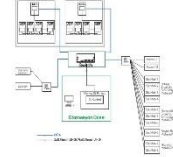
Vadi Bölümü binaları (B-C-D-E Yurt Blokları ve Yemekhane binası) içindeki 2.569 adet aydınlatma elemanının tamamı, benzer aydınlatma aydıteli ve renk sıcaklığına sahip LED aydınlatma armatürleri ile değiştirilecektir.

02

**Enerji Verimliliği Odaklı Çalışmalar****Ortamasyon Sistemi**

Vadi Bölümü binalarında, enerji iletme sistemi (ısıtma sistemi) domestik sıcak su ünitesi, akümülayon motor & pompa, güneş enerji santrali ve mekanik otomasyon sisteminin, EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde kurulması ve etkinliğinin sağlanması sureti ile toplam enerji tüketiminde -93 elektrik, -%16,65 oranında değişim tasarrufu elde edilebileceği hesaplanmıştır.

02

**Enerji Verimliliği Odaklı Çalışmalar****Çeçpe Yalıtım**

Vadi Bölümü binaları (B-C-D-E Blok ve Yemekhane binası) da çeçpe kontrolleri neticesinde yapılan hesaplamaların, yalıtım bölümlerinde daha TS 825 şartlarına karşılanmadığını göstermiştir. Bu çerçevede 10cm kalınlığında U=0,035W/m2K şartını sağlayan taş yünü çeçpe kaplaması tesisi önerilmektedir.

02

**Enerji Verimliliği Odaklı Çalışmalar****Teras Çatı Yalıtım**

Yeni yapılan inşaatın neticesinde Vadi Bölümü binalarında (B-C-D-E Blok ve Yemekhane) çatıda yapılan hesaplamalar mevcut termal yalıtımın TS 825 şartlarına karşılanmadığını ortaya koymaktadır. Bu çerçevede kullanılan kırma çatı arasına mevcut mineral kaplamaların sökülmesi ve yerine, bir yüzü alüminyum folyo kaplı camyünü çatı şerhisi (16cm kalınlıkta, 0,035 < ısı iletkenliği < 0,040W/(m.k) olan) serilmesi ve Vadi Yemekhane Binasında kullanılan teras zeminine 10cm xps termal yalıtım tesisi önerilmektedir.

02

**Enerji Verimliliği Odaklı Çalışmalar**

Yapılan hesaplamalar neticesinde Vadi Bölümü (B-C-D-E Yurt Blokları, Yemekhane ve Spor Salonu) özelinde belirlenen önlem senaryolarının hayata geçirilmesi ile toplam enerji tüketiminde %55,50 oranında tasarruf elde edilebilecek, yaklaşık **825,64 ton/yıl sera gazı emisyonu engellenebilecektir**. Söz konusu renovasyonlar ve yenilenen sistemlerin EN ISO 50001 Enerji Yönetim Sistem şartlarına uygun biçimde işlenmesi ile yıllık **673.332,00 kWh elektrik, 2.263.126,12 kWh doğalgaz** tasarrufu sağlanabilecektir. Söz konusu tasarrufun maddi boyutu yaklaşık 5.366.040,02 TL/yıl seviyesindedir.

02

**İş Sağlığı & Güvenliği**

Yapım sürecine ilişkin, iş sağlığı ve güvenliği planları hazırlanmıştır. **Yüklenici firmamız:**

- Tarımca hazırlanan İŞ SAĞLIĞI GÜVENLİĞİ PLANI doğrultusunda, sorumlu olduğu bütün çalışmalar kapsar mahiyette İŞ SAĞLIĞI GÜVENLİĞİ PLANI ve Risk Analizi hazırlanması ve Müşavir onayına sunulması zorunludur. Ancak söz konusu plan, analizin uygun görülmesi sonrasında çalışmalar başlayacaktır.

Paydaşlarımız bu çalışmalarla ilişkili olarak etimelleri gerekten konular şunlardır:

- Mobil vinç, kompresör vb. iş makinelerinin tamamının periyodik muayene raporlarının temin edilmiş olması ve makineler içinde bazar bulundurulması zorunludur. Söz konusu makineler, yetkili operatörler tarafından kullanılabilir. Operatörler yetki belgelerini hazır bulundurulmalı ve saha kontrolleri, denetimleri esasında yetkili İSG uzmanlarının talepleri doğrultusunda beyan edilebilir.



### İş Sağlığı Güvenliği

- Sahada kullanılan her türlü elektrikli cihaz/ekipmanın elektrik şiddetini gösteren PAT testleri yapılmalıdır. Söz konusu ekipmanın tamamında cihaz üzerlerinde uygunluğu gösteren etiketler yer almaktadır.
- Ancak uygun **Mezemen Yetenekli** Belgesine sahip çalışanların sahaya girme izni verilmeyecektir.
- Bütün çalışanlar/teknisyenler/çalışanlar uygun **Kişisel Koruyucu Ekipmanlara** sahip olmalı ve etkin olarak kullanmalıdır.
- Bütün çalışanlar, «Temel İSG Eğitimi», «Risk Analizi Eğitimi» almış olmalıdır.
- Yüksekte çalışacak personellerin «Yüksekte Çalışma Eğitimi» almış olması zorunludur.
- Bütün çalışanların «EKED - Etiketle Kilitleme Emniyeti Al Dene Eğitimi» almış olması zorunludur.
- Çalışanların «İŞ SAĞLIĞI GÜVENLİĞİ PLANI» içinde belirtilen diğer ilgili eğitimleri çalışmaya başlamadan önce almış olmalıdır.
- İş işkâletinin TS EN 13831-1 standart şartlarını taşıyan olması esastır. Söz konusu iş işkâletinde çalışacak bütün personellerin yüksekte çalışma eğitimi almış olmaları, parasüt tipi emniyet kemeri ve diğer engelleyici ekipmanları kullanmaları zorunludur.
- Kampüs içinde İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirtilen «TRAFİK EYLEM PLANINA» uygun hareket edilmelidir.
- Yüklenici firma, bu çalışma sahası dışında acil durum eylem planları geliştirmeli ve bütün çalışanları kapsayacak mahiyette tabelalar yerleştirmelidir.



### İş Sağlığı Güvenliği

Çalışanların tamamı İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirtilen kişisel koruyucu donanımları disiplinli şekilde kullanmakla yükümlüdür. Söz konusu donanımları uygun şekilde taşımayan/kullanmayanların çalıştırılmaları izin verilmeyecektir.

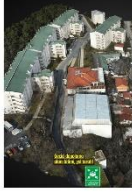
Örnek kişisel koruyucu donanımlar;

- Baret - TS EN 397A11
- Kulak Tıkacı - TS EN 352-2
- Koruyucu Gözlük - TS EN ISO 16321-3
- Genel Amaçlı İş Eldiveni - TS EN ISO 21420
- İş Ayakkabısı - TS EN ISO 20347
- Yarım Yüz Maskesi - TS EN 140
- Parasüt Tipi Emniyet Kemeri - TS EN 361 (Sadece yüksekte çalışan personeller)



### İş Sağlığı Güvenliği

- Acil durumlarda çalışanların toplanacağı bölgeler, deprem riski de dikkate alınarak belirlenmiş ve vaziyet planlarında gösterilmiştir.

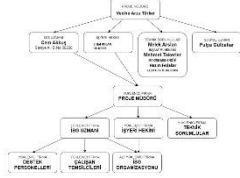


### Trafik Eylem Planı

- Kampüs için araç kullanımına ilişkin sınırlar İŞ SAĞLIĞI GÜVENLİĞİ PLANI içinde belirtilmiştir.



### Sağlık & Güvenlik Organizasyonu



### Çevresel Etkiler

- Proje sahası; **ITU Ayaazga Kampüsü** alanı içindedir. Kampüs dışında yer alan diğer binaların inşaat süreçlerinden doğan etkilerle ilgili konular değildir. Faaliyet alan çevresi aşağıda gösterilmiştir.



### Çevresel Etkiler

- İnşaat çalışmaları sırasında, bölgede hâlihazırda mevcut olan kansızasyon, elektrik ve su şebekeleri kullanılacaktır.
- Fiyat atıklar, belediye himmetlerinden faydalanarak bertaraf edilecek, diğer atıklar için ise geçici depolama alanları oluşturulup, lisanslı firmalara bertarafın yapılması sağlanacaktır. Proje özetinde herhangi bir atık bertaraf alanı gösterilmemiş durumda (kullanılmayan halde) bertaraf alanına sonuca layık (Müdürlük hizmet almış, uzun süreli elektrik kesintisi (mobil jeneratör), uzun süreli su kesintisi (su tankları ile toplu müdahale vb.) mevcut atıkları imkânlar (jeneratör vb.) değerlendirilecek ve ilgili yönetmeliklere uygun olarak bertaraf edilecektir.



### Çevresel Etkiler

- Proje kapsamında, Müşavirin, Yüklencinin firma personellerine vereceği eğitimler sonucunda, yüklencinin firmasının kurumsal kapasitesinin gelişmesi beklenmektedir. Bu eğitimler aşağıda listelenmiştir.

- Çevresel ve Sosyal Etkiler
- Atık Yönetimi
- Çevresel Acil Durumlara Tepki
- Enerji Verimliliği
- Sıhhiyet Mekanizması (SM)



### Çevresel Etkiler

#### Atık Yönetimi

#### İnşaat, Hafiyat Atıkları

- Sekim faaliyetleri sonucunda binaya ait zımmetli malzeme oluşması durumunda bina yönetimine çıkan malzemenin teslim edilmesine dair belge alınacaktır.
- İnşaat/yükleri atıklarının kazanılması ve özellikle alt yapı malzemesi olarak yeniden değerlendirilmesi öncelikli olarak ele alınacaktır. Hafiyat atıkları ilgili belediyenin atık depolama tesisine gönderilecektir. Atıkların sahaya kabul edileceğine dair belediyesinden resmî yazı alınarak idareye sunulacaktır.



### Çevresel Etkiler

#### Atık Yönetimi

#### Tehlikeli Atıklar;

Tehlikeli atıkların yönetimi, **Atık Yönetimi Yönetmeliği** uyarınca gerçekleştirilecektir.

- Proje sahasında tehlikeli atıkların geçici olarak depolanması durumunda atıklar; **sağlam, sızdırmaz, emniyetli ve uluslararası kabul görmüş standartlara uygun konteynerlerde** ve proje alanı içerisinde muhafaza edilecek. Konteynerlerin üzerinde tehlikeli atık taşıması yer verilecek ve depolanması maddelerin atık kodu, miktarı, içeriği, özellikleri, koruma koşulları ve depolama tarihi konteynerler üzerinde belirtilmelidir. Tehlikeli maddeler azami 6 ay geçici olarak depolanabilir. (Geçici depolama alanları yalnızca firma tarafından mevzuata uygun olarak üniversite laboratuvarları ile anlaşarak belirlenecek ve mevzuatı sağ konusunda anlaşılabilir olacaktır.)
- Zararlı maddelerin saklandığı konteynerler ve atık yağlar toprağa dökülme ve sızıntı önlemek için **sızdırmaz beton alanlara** yerleştirilecektir.
- Zehirli içeriğe sahip boyalar, eritici madde (solvent) ya da kurşun bazı kimyasallar **kullanılmayacaktır**.

Kamu Binalarında Deprem Dayanımı  
ve Enerji Verimliliği Projesi

## Çevresel Etkiler

## Atık Yönetimi

## Tehlikeli Atıklar:



- Sanayi sahalarında olumsuz muhtemel tehlikeli kimyasal madde ve atıkların Çevre Şehircilik ve İklim Değişikliği Bakanlığı çevrim programı Entegre Çevre Bilgi Sistemi (E-CBS) üzerinden atık yönetimi uygulamaları kullanılarak lisansla bertaraf tesislerine gönderilecektir.
- Çalışma sahalarında **dökümü zemin emki ped kitleleri** hazır bulundurulacaktır. Görevli bütün personeller **tehlikeli kimyasal atık ve döküntülerine ilişkin koruma ve acil durum eğitimi** tabi tutulacaktır.
- Orta ve büyük ölçekli çevresel kazaların oluşması halinde, kazaların ortadan kaldırılması yapılacaktır ve raporlanacaktır.
- Tadilat/insaat çalışmalarında sükülün kullanımına **florasan lambalar** ruhsatı tesisinde bertaraf edilecektir. Mahremetin taşınması ve bertarafına ilişkin gerekli belgeler, inşaat sahasında tutulacak ve istenirse ÇŞİB ve Dünya Bankası'na ibraz edilecektir.



## Çevresel Etkiler

## Atık Yönetimi

## Eysel Atıklar:



- Oluşacak esvel nitelikli atıklar kaynağında ayrıştırılacak (plastik, cam, kağıt, vb.) ve değerlendirilebilir olanların geri dönüşümü sağlanacaktır. Atıkların uygun biçimde **ayrıştırılması** için çalışanlara **eğitim** verilecektir.
  - Geri kazanımı mümkün olmayan atıklar, ağır kapalı sahni çöp bidonlarında biriktirilecek. Yeteli Belediyenin katı atık toplama sistemi aracılığıyla dışarıya depolanma sahalarna gönderilecektir.
- Ambalaj Atıkları:**
- Kontamine olmama **geri dönüştürülebilir** atıkları (plastik, cam, kağıt, vb.) geri dönüşümü sağlanacaktır. Atıkların uygun biçimde ayrıştırılması için çalışanlara **eğitim** verilecektir.
  - Tehlikeli maddeler ile kontamine olmuş atıkların tamamı, **tehlikeli atık statüsünde** değerlendirilecektir.



## Sosyal Etkiler

Paydaşlarımızla aktarmak istediğiniz hususlar şunlardır:



- Söz konusu çalışmaların, **hava dayanımı olumsuz** etkilimesi söz konusu değildir.
- Güçlendirme ve renovasyon çalışmalarında, kullanıcı ve diğer paydaşların çalışma sahalarna yaklaşım alanı hususunda yapılacak olan önlemlerle kate olarak destek verilmemi rica ediyoruz.
- Güçlendirme ve renovasyon çalışmalarında, çalışma sahalarna girmek için gerekli işlemler, görevli personeller tarafından gerçekleştirilecektir. Bu konuda ilişkin şikayetlerinizi lütfen bize bildirin.
- Proje görev alan çalışanların, hiç bir koşulunda paydaşlarla tartışılması hususunda gerekli uyarılar yapılacaktır. Böyle bir durumda karşılama halinde öneri ve şikayet mekanizmaları vasıtasıyla bizlere ulaşmanız bekliyoruz. (Öneri & şikayet kartı).
- Bütün çalışanlar ayrımcılık, cinayettelli şiddet konusunda bilgilendirilecektir ve proje kapsamında bu tip davranışlara hiçbir part ve koşul altında izin verilmeyeceği bildirilmektedir. Bu yaklaşıma aykırı hareket edenlerin, projede görev almaması ya da görevlerini devamlılığına mizaade edilmeyecektir.



## Sosyal Etkiler

Proje kapsamında, Müşairin Yüklüleri personeline vereceği eğitimler sonrasında Yüklüleri firmasının kurumsal kapasitesinin geliştirilmesi beklenmektedir. Bu eğitimler aşağıda listelenmiştir:



- Çevresel ve Sosyal Etkiler
- Paydaş Katılımı/Bilgilendirme Faaliyetleri
- Şikayet Mekanizması (2M)
- Cinayet Eğiğiği/ Cinayet Temelli Şiddet/Cinuel Sömürü/Cinuel Saldırı/Cinuel Taciz
- Davranış Kuralları
- Tarihî Mirasın Korunması

Yüküleri firmaların umyalan **görevli işçileri ve görevli kurulları ile genel çevresel sosyal etkiler/etkileri**, bu proje kapsamında hazırlanan **İSG PLANI ve ÇEVRESSEL ve SOSYAL YÖNETİM PLANI** içinde açıklanmıştır.

## Öneri Şikayet Sistemi

Öneri ve şikayetlerinizi, içeriği ne olursa olsun, nasıl kaleme alırsanız alırsanız bizim için değeri olduğunu bilmenizi istiyoruz. Genel etik ilkelere uygun iletişim için öneri ve şikayetlerinizden dolayı olumsuz herhangi bir durumda karşılama yapacağımızı, eleştirilmeyeceğimizi garanti ediyoruz. Öneri ve şikayetlerinizi hangi yöntemle isterseniz **iletin (şikayet kutuları), mail , internet formları, yüz yüze sözlü ya da telefon)** hepsi aynı şekilde değerlendirilir, tamamı gizli statüsündedir, tarafız bir kuru tarafından incelenir.



Bu proje hakkında genel bilgi almak, çevresel ve sosyal proje dokümanlarına erişmek ya da öneri ve şikayetlerinizi bildirmek için; <https://kamuguculendime.csb.gov.tr> web sayfasına ziyaret edebilirsiniz.



## Öneri Şikayet Sistemi

Çevre, Şehircilik ve İklim Değişikliği Bakanlığının (ÇŞİB) hem telefon hem de web sitesi aracılığıyla erişilebilen bir "Alo181" yardım hattı vardır. Bu yardım hattı aynı zamanda çalışanların, çözüm ortakları ve diğer geniş zümreler için bakanlık düzeyinde bir şikayet mekanizması görevi görür. ÇŞİB tarafından sağlanan tüm çevre ve şehir hizmetleri ile ilgili soru, talep ve şikayetler profesyonel olarak yönetilen ALO 181 çağrı merkezi tarafından yanıtlanmaktadır ya da Proje Uygulama Birimine iletilebilir.

KADEV projesi için şikayet ve öneri sahipleri aşağıda verilen farklı kanallardan taleplerini iletebilirler.

Çağrı Merkezi : ALO 181  
Telefon : 0312 586 4858  
E-Mail : [yigit@kadev.csb.gov.tr](mailto:yigit@kadev.csb.gov.tr)  
Şikayet Formu : <https://kadev.csb.gov.tr/oneri.jsp>



## Öneri Şikayet Sistemi

İnternet üzerinden şikayet formuna hemen erişim için kütlenin yanındaki telefonunuza okutun.



(Bu eylem için akli telefonunuzda QR kod uygulamaları kullanılmalıdır. Söz konusu uygulama yoksa, herhangi bir akli telefonla QR kodunu okutarak şikayet formuna erişim adresini yönlendirebilirsiniz.)



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