REPUBLIC OF TÜRKİYE
MINISTRY OF ENVIRONMENT, URBANIZATION AND CLIMATE CHANGE
GENERAL DIRECTORATE OF CONSTRUCTION AFFAIRS

Seismic Resilience & Energy Efficiency in Public Buildings Project (SREEPB)

Structural Assessment, Energy Audit, Structural-Energy Retrofit Design and Construction Supervision Consultancy Services for the Elazığ Fırat University and Tunceli Government Buildings (WB/CS-DESSUP-05)

FIRAT UNIVERSITY

GROUP-1 BUILDINGS

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

FEBRUARY 2026

Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş.

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ABBREVIATIONS

BP	Bank Procedure
CİMER	Presidency's Communication Center
Consultant	TİMA & OBS
C-ESMP	Contractor Environmental and Social Management Plan
dBA	Noise Assessment Measure (According to A curve)
dBC	Noise Assessment Measure (According to C curve)
E&S	Environmental and Social
E-ÇBS	Integrated Environmental Information System
EIA	Environmental Impact Assessment
EHS	Environment, Health and Safety
ESF	Environmental and Social Management Framework
ESIA	Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
GBV	Gender-based Violence
GDCA	General Directorate of Construction Affairs
GHG	Greenhouse Gases
GM	Grievance Mechanism
HAYEF	Hasan Âli Yücel Faculty of Education
IFC	International Finance Corporation
ILO	International Labour Organization
LC Max	Peak Value of C-weighted RMS Sound Level Measured in dBC Over the Measurement Period
LLST	Label Lock Secure Test
LMP	Labor Management Plan
MoEUCC	Ministry of Environment, Urbanisation and Climate Change
MSDS	Material Safety Data Sheet
OHS	Occupational Health and Safety
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
SEA	Sexual Exploitation and Abuse
SEF	Stakeholder Engagement Framework
SES	Solar Energy System
SH	Sexual Harassment
SPS	Solar Power System
SREEPB	Seismic Resilience and Energy Efficiency in Public Buildings
TSE	Turkish Standards Institute
TSVS	School of Technical Sciences Vocational
WHO	World Health Organization
VHS	Vocational Higher School
WB	World Bank
WBG	World Bank Group
WMP	Workforce Management Plan
YİMER	Foreign Communication Center

EXECUTIVE SUMMARY

Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project will support the structural reinforcement and renovation or demolition and reconstruction of public buildings with high seismic risk and low energy efficiency, such as dormitories, social service institutions, government houses, and hospitals. Within this scope, the buildings included in this sub-project, referenced as WB/CS-DESSUP-05, 25 buildings in Fırat University Campus in Elazığ province.

This Environmental and Social Management Plan (ESMP) provides information on the structural strengthening and energy efficiency–focused improvement works to be carried out in 13 of the 25 buildings classified as Group 1 within the campus of Fırat University, located in the Central District of Elazığ Province, as well as on the construction of a prefabricated lightweight steel laboratory building. The Plan outlines the measures required to ensure that the environmental and social impacts that may arise from the aforementioned works and renovation activities are kept at acceptable levels and/or eliminated.

The 13 buildings subject to strengthening and energy efficiency–focused improvement works are: Atatürk Cultural Center, Library, Computer Engineering Building, Metallurgical and Materials Engineering Building, Electrical Engineering Building, Civil Engineering Building, Geological Engineering Building, Chemical Engineering Laboratory, Mechanical Engineering Building, Mechanical Engineering Additional Building, Guesthouse, Faculty of Engineering Dean's Office, Rectorate Building, and the Metal Workshop of the Faculty of Technology. In addition, the construction of a prefabricated lightweight steel laboratory building to be allocated to the use of the Department of Chemical Engineering will also be addressed under the subproject.

This document has been prepared in accordance with the applicable national and international legislation governing the activities. Furthermore, this ESMP provides information on stakeholder engagement activities to be conducted within the scope of the project and on the Grievance Mechanism (GM) to be established and sets out the roles and responsibilities of relevant parties involved in the project.

INTRODUCTION

This Environmental and Social Management Plan (ESMP), prepared within the scope of the Seismic Resilience and Energy Efficiency in Public Buildings Project (SREEPB), aims to clearly define who will implement the required mitigation measures, when, how often, and by what means during the structural strengthening and energy efficiency–focused activities to be carried out in a total of 13 buildings at Fırat University located in the Central District of Elazığ Province — namely the Atatürk Cultural Center, Library, Computer Engineering Building, Metallurgical and Materials Engineering Building, Electrical Engineering Building, Civil Engineering Building, Geological Engineering Building, Chemical Engineering Laboratory, Mechanical Engineering Building, Mechanical Engineering Annex Building, Guesthouse, Faculty of Engineering Dean's Office, Rectorate Building, and the Metal Workshop of the Faculty of Technology — as well as during the construction phases of the new prefabricated lightweight steel Chemical Laboratory building.

The Plan includes the measures required to ensure that potential adverse environmental and social impacts arising during the works are kept at acceptable levels or eliminated, and it also covers occupational health and safety precautions to be taken throughout implementation.

Furthermore, this ESMP provides information on stakeholder engagement activities conducted within the scope of the project and on the Grievance Mechanism (GM) to be established, and sets out the roles and responsibilities of relevant parties involved in the project.

This ESMP has been prepared primarily in accordance with Turkish laws and regulations and, in addition, in alignment with World Bank policies and safeguard requirements.

1. GENERAL PROJECT AND PROJECT SITE INFORMATION

1.1 Project Description

1.1.1. General Information & Objectives

The main objective of the Seismic Resilience and Energy Efficiency in Public Buildings (SREEPB) Project is to strengthen public buildings that are inefficient in energy use and at high seismic risk (such as educational buildings, dormitories, hospitals, and administrative buildings) against earthquakes, while also improving energy efficiency in these buildings. Additionally, the project aims to increase public awareness by constructing earthquake-resistant and energy-efficient buildings.

The project involves determining the seismic behavior of the foundations and structural systems of existing public buildings with different uses and working to eliminate risks through structural reinforcement. The project also aims to improve energy efficiency, reduce energy consumption and CO_2 emissions, monitor and control energy consumption, address the current energy deficit, and create a model to make all public buildings in Türkiye energy-efficient after the project is completed. This will also contribute to the development of the sector and raise awareness.

The structural reinforcement works in the project include building structural system renovations and additions, as well as ground reinforcement works if necessary. The energy efficiency-focused works cover facade and roof insulation, replacement of facade components such as windows and doors, mechanical system revisions, changes in HVAC systems, revisions and changes in ventilation systems, integration of building energy monitoring and automation systems into the existing electrical system, and the installation of solar panels for electricity generation.

Within the framework of the World Bank's Environmental and Social Framework (ESF) and the defined Environmental and Social Standards, the SREEPB Project is considered to have a "Moderate" level Environmental and Social Risk Rating. This is due to the fact that the activities to be carried out will not cause irreversible adverse environmental and social impacts and risks, any potential effects/risks are expected to be temporary and reversible, the scale and nature of the potential effects/risks are moderate, and the sub-project areas are not located in sensitive environmental or social areas. Additionally, no significant adverse impacts on human health and the environment are anticipated from the project activities.

The structures covered under the subproject subject to this ESMP are located within the campus of Fırat University in the Central District of Elazığ Province. Structural strengthening and energy efficiency–focused improvement activities will be carried out in 13 buildings listed in Table 1, which collectively comprise a total of 45 blocks. The buildings will be vacated by the Beneficiary Institution during construction activities. In addition, the construction of a two-store prefabricated lightweight steel Chemical Laboratory building, allocated by the university within the campus area and requiring no land acquisition, is also addressed within the scope of this project. Potential adverse impacts that may arise during construction activities will be minimized through the implementation of mitigation measures. All necessary precautions will be taken to ensure that impacts on surrounding buildings/structures and the district remain at acceptable levels, and these measures are presented in detail in Table 8.

It is anticipated that the activities carried out as part of the construction works, due to their nature, will cause minimal environmental and social impacts that are not critical within the scope of the current project boundaries. Within the Environmental and Social Standards defined in the World Bank's Environmental and Social Framework (ESF), the SREEPB Project is assessed with a Moderate level Environmental Risk Rating because the planned activities will not create permanent negative environmental and social impacts or risks, the potential impacts are expected to be temporary and reversible, the scale and nature of the potential impacts/risks are moderate, and the sub-project areas are not in environmentally or socially sensitive locations. It is also not expected that these activities will have significant adverse effects on human health or the environment.

The renovation, repair, and energy efficiency works to be carried out under the SREEPB Project are exempt from the Environmental Impact Assessment (EIA) process according to the EIA Regulation.

This ESMP has been prepared as a guiding document for the SREEPB Project in accordance with WB and national regulations and best practices to eliminate, or if not possible, minimize environmental impacts such as waste generation (hazardous and non-hazardous), air and water pollution; social impacts such as conflicts with daily institutional activities; and occupational health and safety (OHS) impacts concerning the health and safety of workers and beneficiaries.

The project will be executed with the financing of the World Bank and will be managed by the General Directorate of Construction Affairs (GDCA) of the Ministry of Environment, Urbanization and Climate Change (MoEUCC). GDCA will be responsible for overseeing the control, management, and coordination of the project's implementation. The Consultant company will be responsible for the preparation of this ESMP, as it is an integral part of the project's specifications and tender documents, and for ensuring that all activities undertaken throughout the project comply with this ESMP. The contractor will also be responsible for implementing the ESMP on-site.

1.1.2. Project Information

The information regarding the buildings within the scope of the sub-project is provided in Table 1.

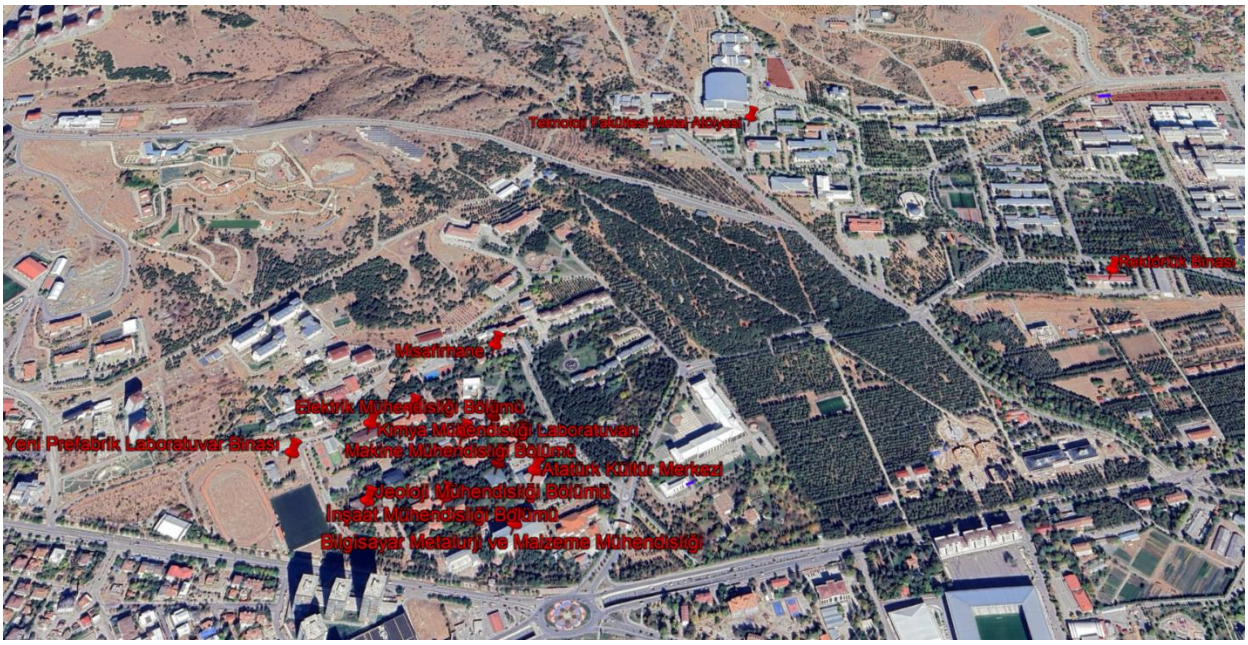


Figure 1 - Buildings within the Project Scope at Fırat University Campus

Table 1 - Project Site Information

GENERAL INFORMATION	
Province	Elazığ
District	Center
Campus Name	Elazığ Fırat University
Buildings Subject to Structural Strengthening and Energy Efficiency–Focused Improvement Works	
Building Name	**Constraction Area (m2)**
FU Atatürk Cultural Center	2,102
FU Library	1771
FU Computer Engineering, Metallurgical and Materials Engineering Building	17,310
FU Department of Electrical Engineering	5,482
FU Department of Civil Engineering	3,621
FU Department of Geological Engineering	5,398
FU Chemical Engineering Laboratory	1,446
FU Department of Mechanical Engineering	4,108
FU Mechanical Engineering Annex Building	2,929
FU Guesthouse	1,478
FU Faculty of Engineering Dean's Office	1,795
FU Rectorate Building	4,335
FU Faculty of Technology Metal Workshop	2,280

Total Constraction Area				**54,055**		
Construction of the Prefabricated Lightweight Steel Laboratory Building						
Prefabricated Laboratory Building (New Construction)				2,000		
Usage Status				The buildings are currently in use by Fırat University for educational and administrative purposes.		
Number of Users						
	Student Numbers			**Personel Numbers**		
Building Name	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
FU Atatürk Cultural Center	338	330	668	29	9	38
FU Library	22,027	19,098	41,125	1	5	6
FU Computer Engineering, Metallurgical and Materials Engineering Building	928	306	1234	35	10	45
FU Department of Electrical Engineering	620	122	742	29	9	38
FU Department of Civil Engineering	270	61	331	32	5	37
FU Department of Geological Engineering	124	56	180	18	17	35
FU Chemical Engineering Laboratory	49	60	109	13	6	19
FU Department of Mechanical Engineering	274	26	300	34	6	40
FU Mechanical Engineering Annex Building	274	26	300	8	1	9
FU Guesthouse	20	20	40	4	5	9
FU Faculty of Engineering Dean's Office	-	-	-	17	5	22
FU Rectorate Building	-	-	-	89	40	129
FU Faculty of Technology Metal Workshop	162	32	194	10	3	13
TOTAL	25.086	20.137	**45.223**	319	121	**440**

ENERGY EFFİCİENCY WORKS PLANNED FOR THE BUİLDİNGS WİTHİN THE PROJECT SCOPE

The common energy efficiency works planned for the 13 buildings under the subproject are listed below:

- Application of thermal insulation to building walls and roofs with appropriate insulation thicknesses
- Replacement of existing windows with PVC-framed 4+16+4 mm double-glazed Low-E heat and solar control coated glass
- Insulation of mechanical installation equipment located in heat exchanger rooms using appropriate insulation materials
- Replacement of 6,408 inefficient lighting fixtures with LED lighting fixtures
- Installation of a Building Automation and Energy Monitoring and Measurement System
- Installation of a ground-mounted photovoltaic solar power plant with a capacity of 805 kWp supplying Group-1 buildings
- The building-based distribution of the installation of thermostatic radiator valves and the replacement of 24 inefficient pumps located in heat exchanger rooms with variable-speed, high-efficiency pumps is provided in the tables below

No	Name of the Building Group	Number of Radiators
1	FU Atatürk Cultural Center	52
2	FU Library	63
3	FU Computer Engineering, Metallurgical and Materials Engineering Building	386
4	FU Department of Electrical Engineering	184
5	FU Department of Civil Engineering	104
6	FU Department of Geological Engineering	171
7	FU Chemical Engineering Laboratory	41
8	FU Department of Mechanical Engineering	140
9	FU Mechanical Engineering Annex Building	107
10	FU Guesthouse	47
11	FU Faculty of Engineering Dean's Office	72
12	FU Rectorate Building	136
13	FU Faculty of Technology Metal Workshop	78
TOTAL		**1.581**

Heat Exchanger Room	Working Area	Flow Rate m^3/h	Head (mWC)	Motor Power kW	Quantity	Annual Operating Duration (hours)
FU Atatürk Cultural Center	Circulation Pump for the Heating Circuit	12	10	0,75	2	1850
FU Computer Engineering	Circulation Pump for the Heating Circuit	25	10	1,5	2	1850
FU Department of Electrical Engineering	Circulation Pump for the Heating Circuit	15	10	1,1	2	1850
FU Department of Civil Engineering	Circulation Pump for the Heating Circuit	25	10	1,5	2	1850
FU Department of Geological Engineering	Circulation Pump for the Heating Circuit	15	10	1,1	2	1850
FU Chemical Engineering Laboratory	Circulation Pump for the Heating Circuit	10	9	0,75	2	1850
FU Department of Mechanical Engineering	Circulation Pump for the Heating Circuit	12	10	1,1	2	1850
FU Mechanical Engineering Annex Building	Circulation Pump for the Heating Circuit	12	10	1,1	2	1850
FU Guesthouse	Circulation Pump for the Heating Circuit	18	10	1,1	2	1850
	Circulation Pump for the Boiler Heating Circuit	5	4	0,25	2	1850
	Boiler Hot Water Recirculation Pump	1	4	0,035	1	1850
FU Faculty of Engineering Dean's Office		7	9	0,5	2	1850
FU Rectorate Building		10	10	0,75	2	1850

STRUCTURAL RETROFITTING WORKS PLANNED TO BE CARRIED OUT IN THE BUILDING

- Strengthening of shear wall and column elements in the buildings
- Application of FRP (Fiber Reinforced Polymer) strengthening on beams

- As a result of the strengthening works, architectural, mechanical, and electrical installation elements in the affected areas may require modification and/or renovation; therefore, reconfiguration of the relevant systems and execution of installation and integration works will be carried out

DURATION AND SEASON OF ACTIVITIES

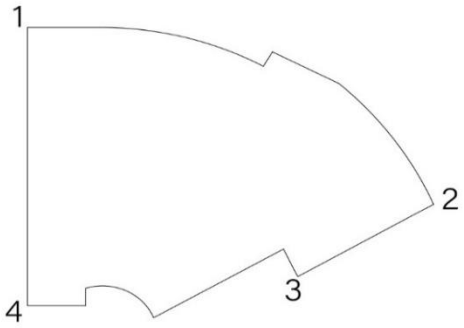
The activities to be carried out under the project are planned to be implemented between the first quarter of 2026 and the first quarter of 2027. The Contractor shall be responsible for completing the works in the buildings within the planned timeframe as specified in the Terms of Reference. Furthermore, prior to commencing any construction activities, the Contractor shall clearly and in advance inform all stakeholders about the construction schedule.

EXPECTED NUMBER OF WORKERS

The anticipated workforce is estimated at a total of twenty-five (25) workers per building per day, comprising ten (10) personnel for strengthening works and fifteen (15) personnel for energy retrofit works. This number may vary throughout the implementation period depending on the progress of construction activities.

The satellite image of Fırat University and the coordinates of the buildings are provided below.

Figure 2 - Satellite Image of Fırat University Campus and Coordinates of the Buildings



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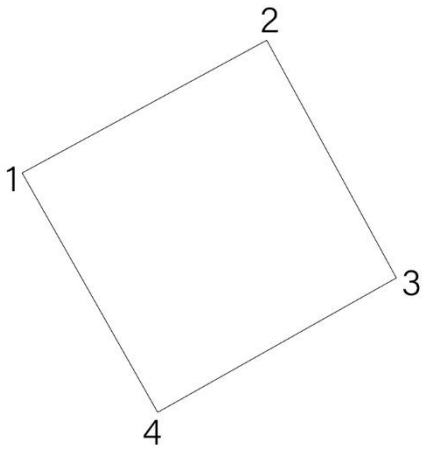
4	516448.23	4280557.74	39.18	38.67

Figure 3 - Ataturk Cultural Center Coordinate Data



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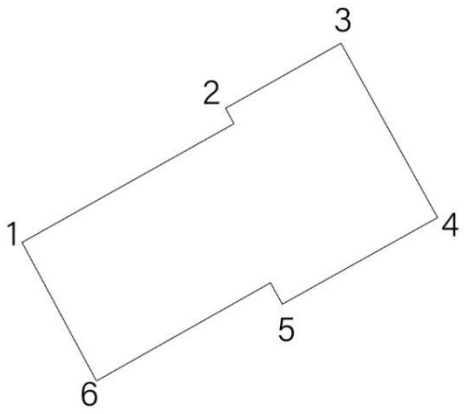
4	516388.20	4280573.54	39.18	38.67

Figure 4 - Library Coordinate Data



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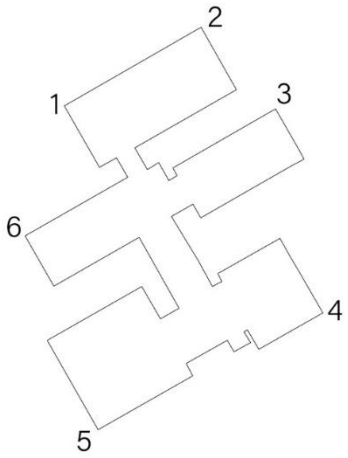
3	516461.45	4280524.67	39.18	38.67
4	516480.20	4280491.31	39.18	38.67
5	516449.95	4280475.45	39.18	38.67
6	516412.67	4280459.87	39.18	38.67

Figure 5 - Computer Engineering, Metallurgical and Materials Engineering Building Coordinate Data



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4	516262.98	4280710.03	39.18	38.67
5	516449.95	4280475.45	39.18	38.67
6	516213.83	4280684.70	39.18	38.67

Figure 6 - Department of Electrical Engineering Coordinate Data

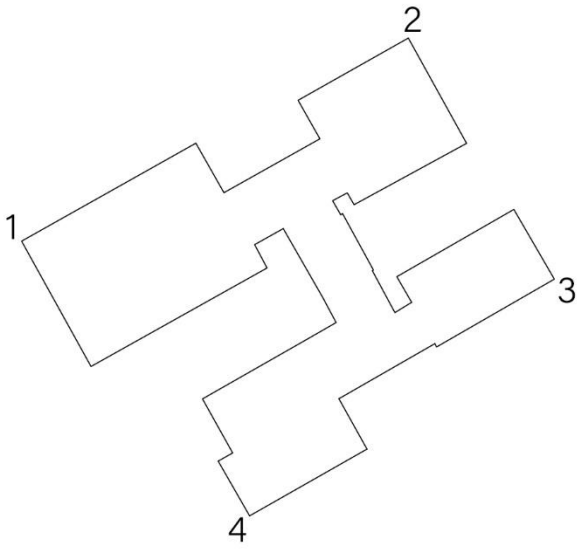

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Figure 7 - Department of Civil Engineering Coordinate Data

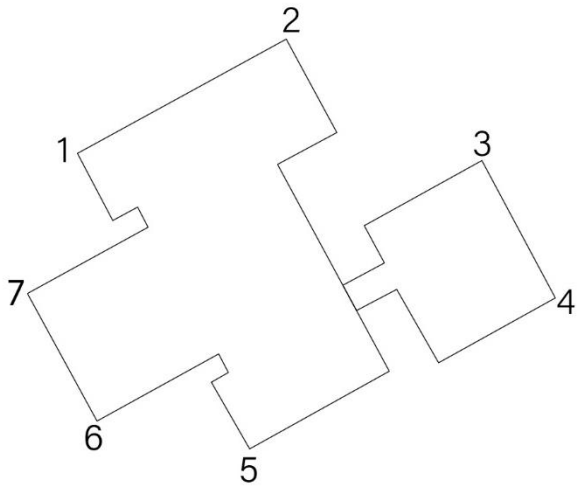

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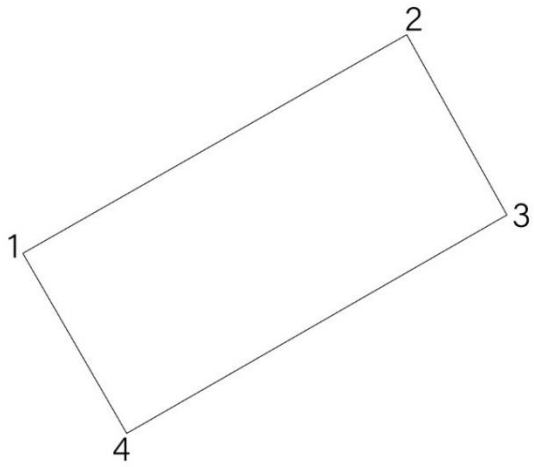
Figure 8 - Department of Geological Engineering Coordinate Data



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4	516145.88	4280655.08	39.18	38.67

Figure 9 - Chemical Engineering Laboratory Coordinate Data

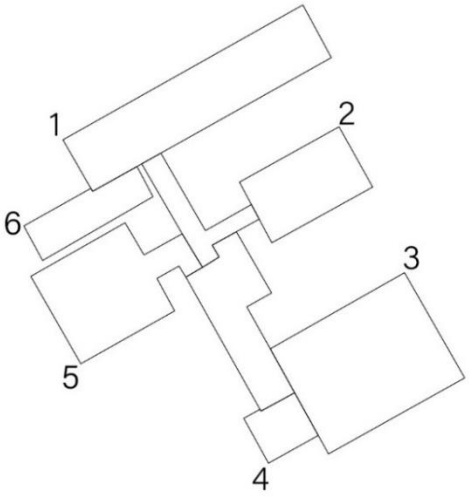

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Figure 10 - Department of Mechanical Engineering Coordinate Data

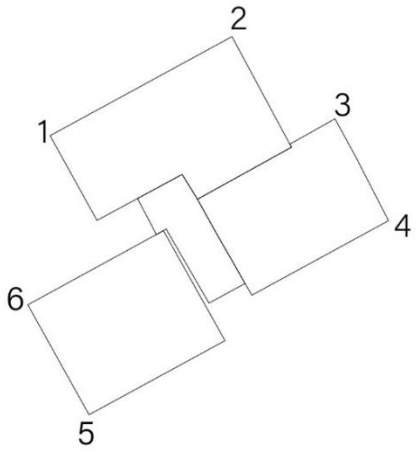

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Figure 11 - Mechanical Engineering Annex Building Coordinate Data

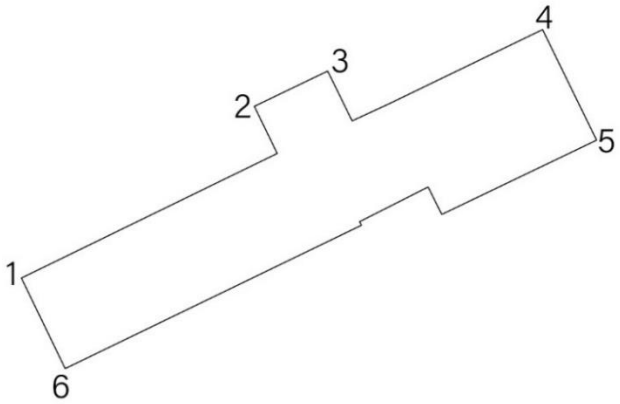

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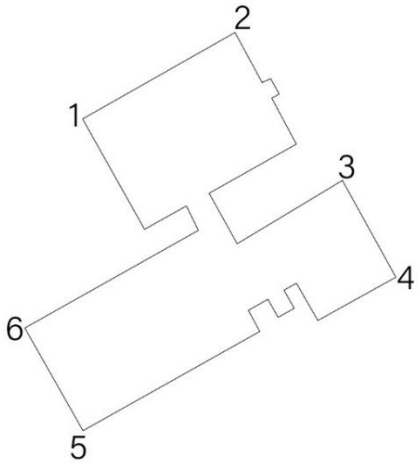
Figure 12 - Guesthouse Coordinate Data



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5	516407.17	4280638.06	39.18	38.67
6	516400.06	4280649.57	39.18	38.67

Figure 13 - Faculty of Engineering Dean's Office Coordinate Data

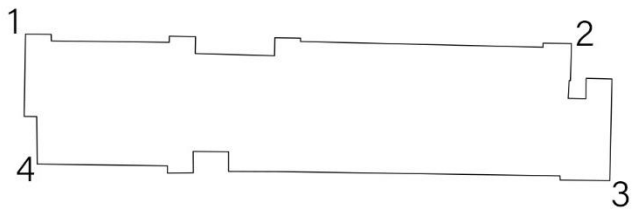

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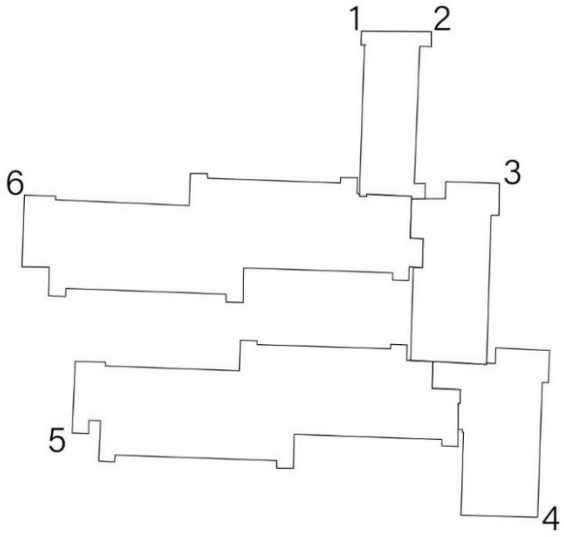
Figure 14 - Rectorate Building Coordinate Data



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1	517035.45	4281476.56	39.19	38.68
2	517048.31	4281476.63	39.19	38.68
3	517064.21	4281440.45	39.19	38.68
4	517073.26	4281367.87	39.19	38.68
5	516971.01	4281387.91	39.19	38.68
6	516960.70	4281438.85	39.19	38.68

Figure 15 - Faculty of Technology Metal Workshop Coordinate Data

Potential adverse impacts that may occur during the retrofitting and renovation works at the 13 faculty buildings will primarily take place within the building. As no ground-improvement activities are required, external impacts will be limited to noise and dust generation, minor traffic increases, vibration, and visual disturbances. The radius within which these impacts may affect surrounding buildings has been limited to 100 meters, and the major impact zone is presented below figures (between Figure 16 and Figure 28 included).

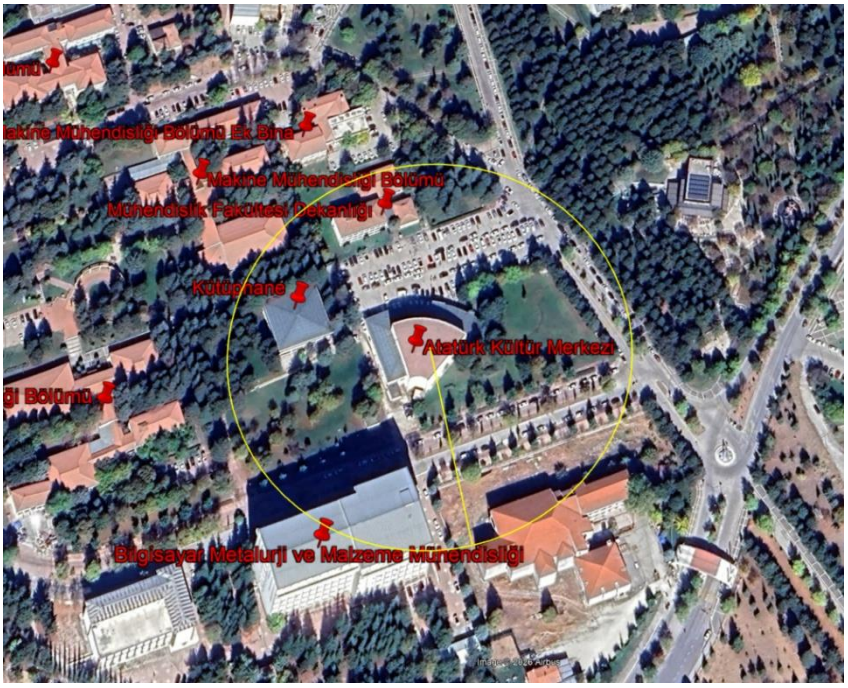


Figure 16 - FU Atatürk Cultural Center Major Impact Zone

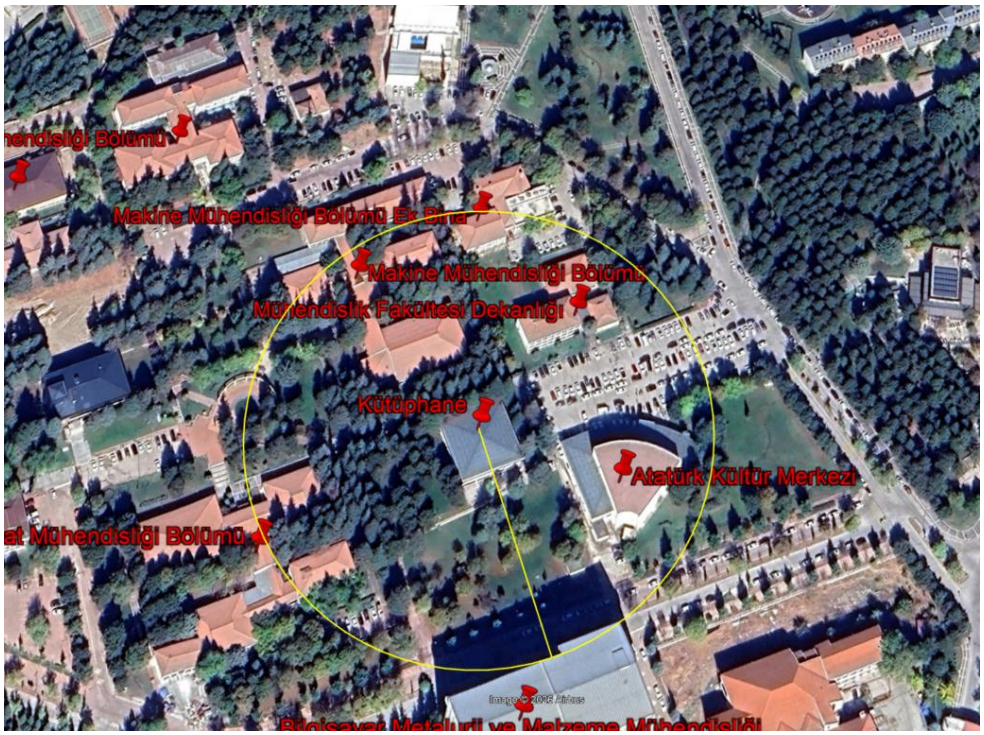


Figure 17 - FU Library Major Impact Zone

Figure 18 - FU Computer Engineering, Metallurgical and Materials Engineering Building Major Impact Zone

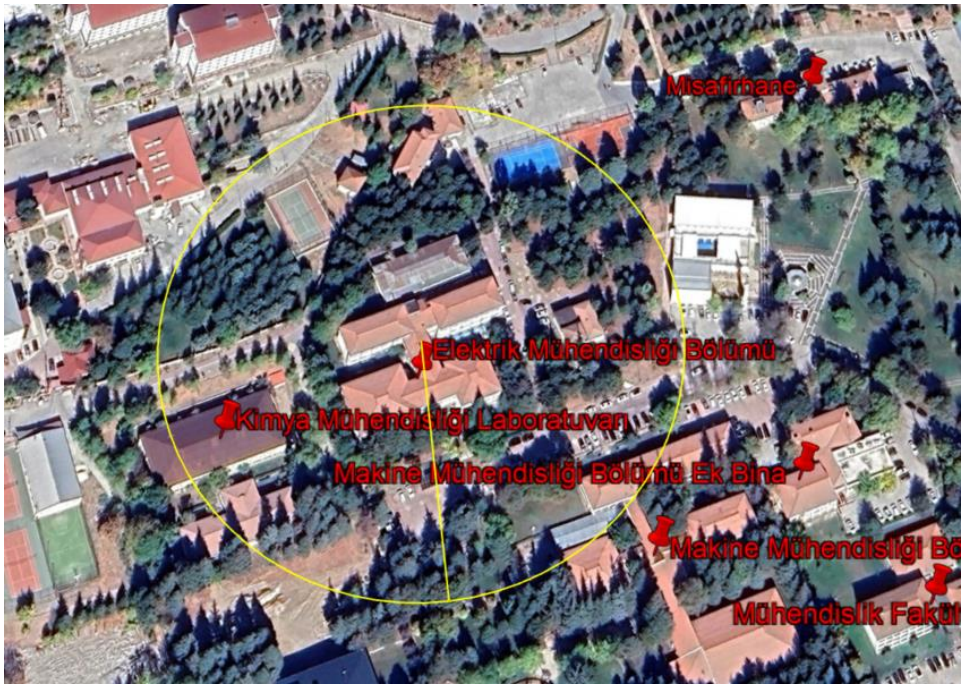


Figure 19 - FU Department of Electrical Engineering Major Impact Zone

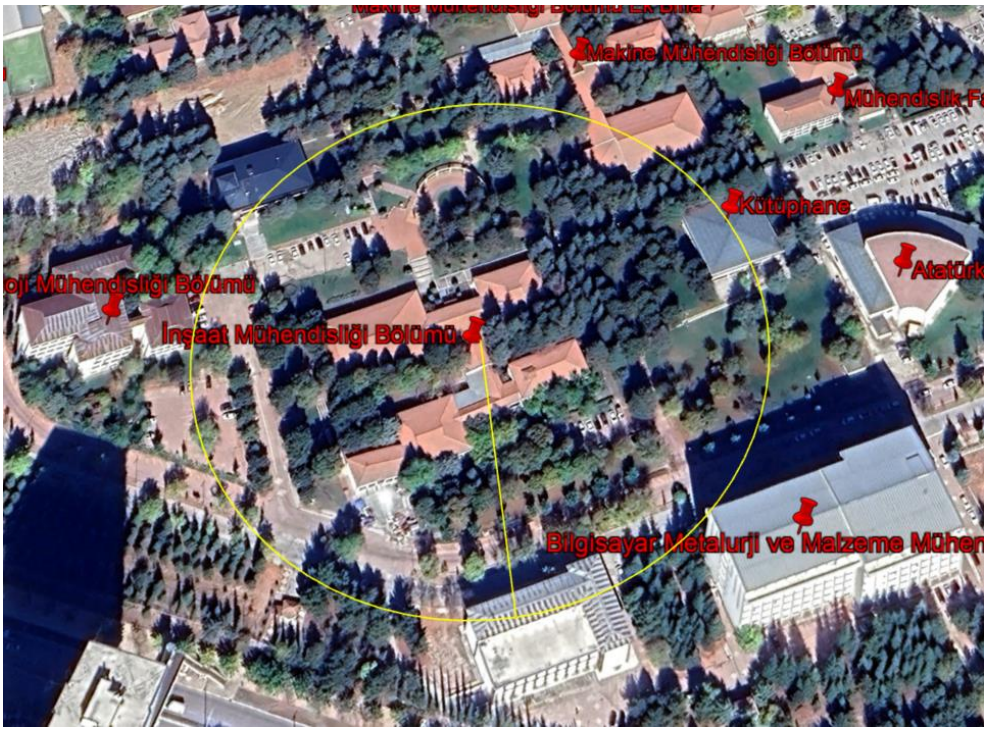


Figure 20 - FU Department of Civil Engineering Major Impact Zone

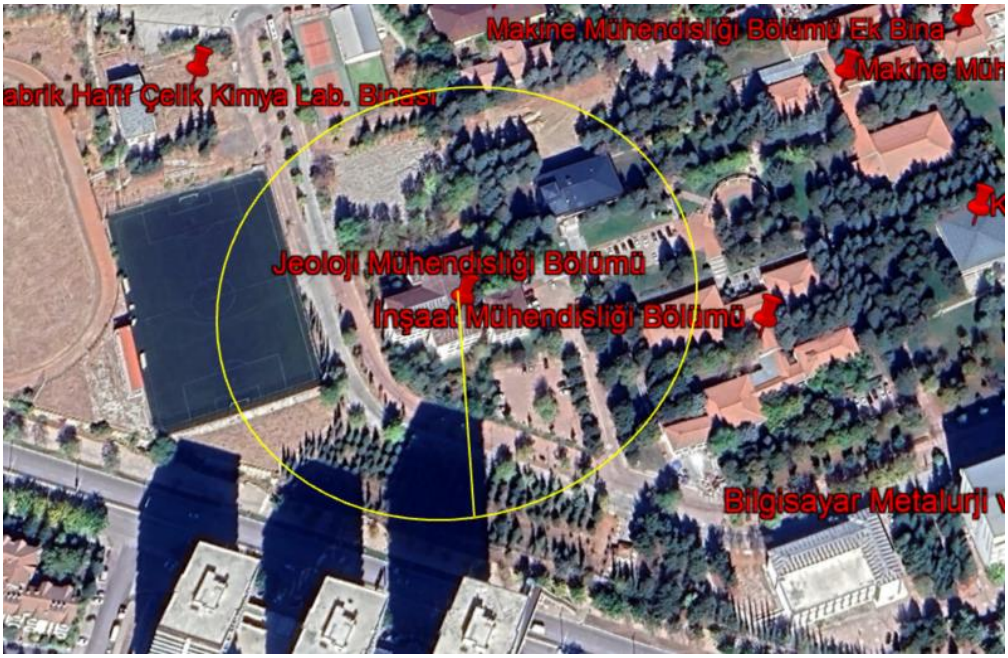


Figure 21 - FU Department of Geological Engineering Major Impact Zone

Figure 22 - FU Chemical Engineering Laboratory Major Impact Zone

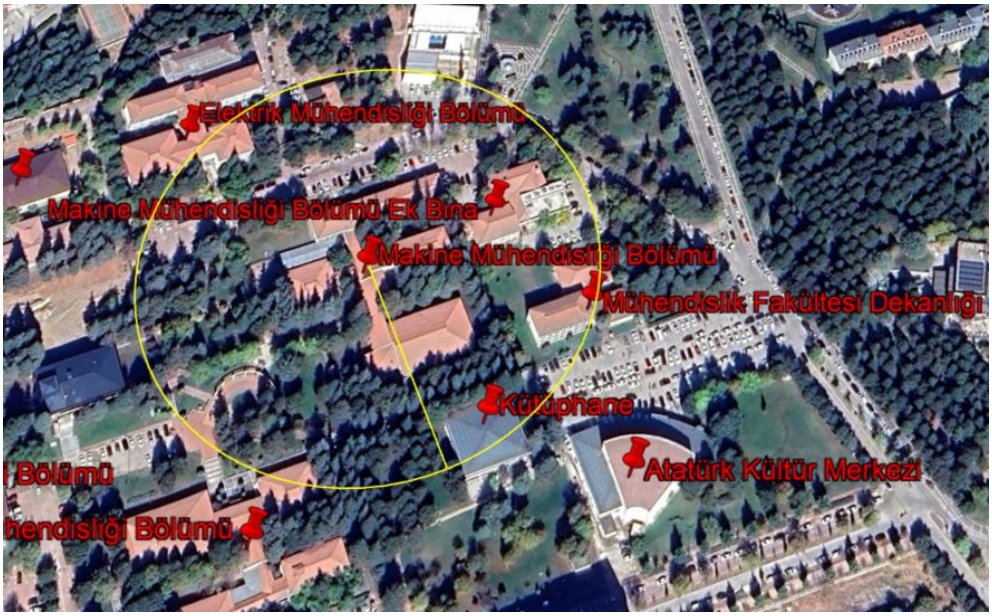


Figure 23 - FU Department of Mechanical Engineering Major Impact Zone

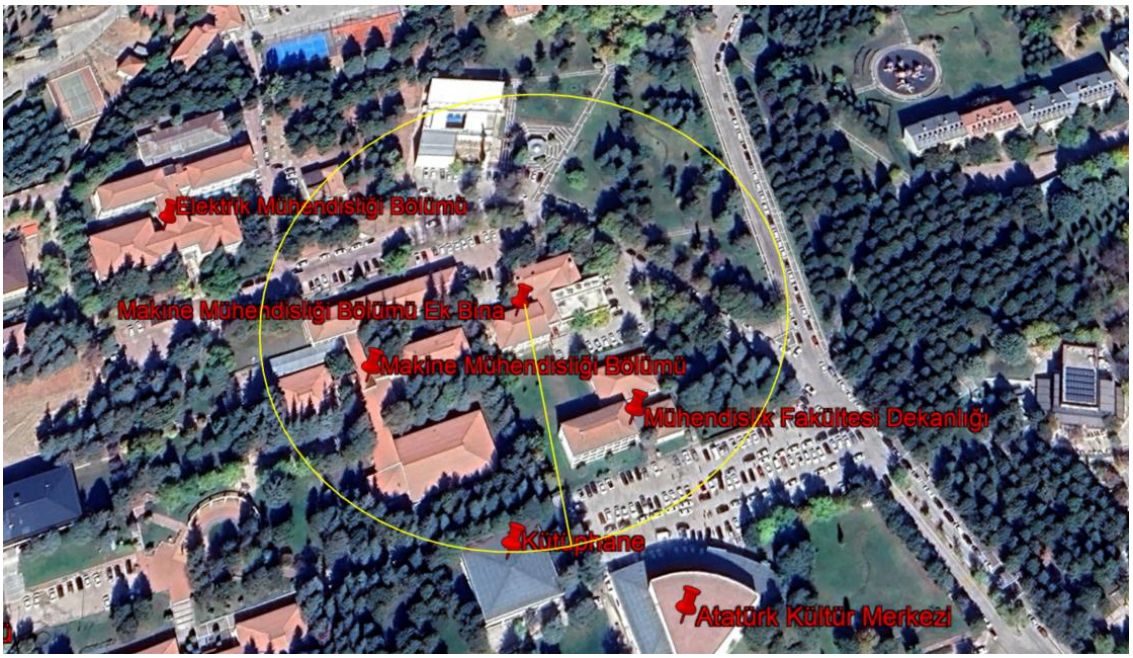


Figure 24 - FU Mechanical Engineering Annex Building Major Impact Zone

Figure 25 - FU Guesthouse Major Impact Zone

Figure 26 - FU Faculty of Engineering Dean's Office Major Impact Zone

Figure 27 - FU Rectorate Building Major Impact Zone

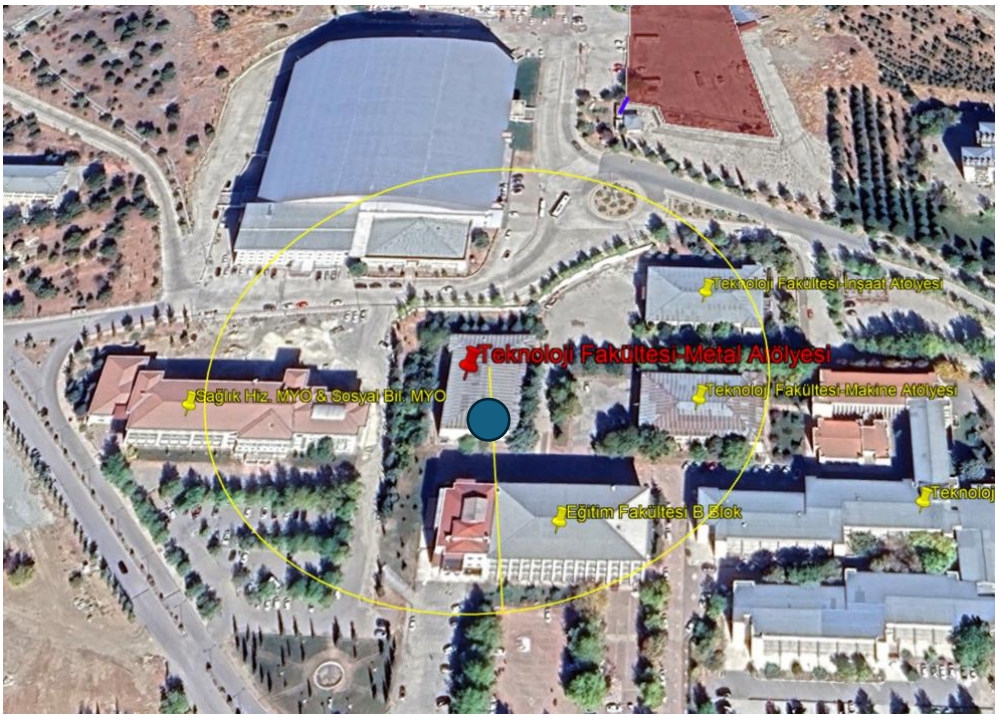


Figure 28 - FU Faculty of Technology Metal Workshop Major Impact Zone

The table below presents the structures and areas located within the 100 m radius major impact areas that may be temporarily affected by impacts such as dust, noise, and vibration during construction activities. The indicated distances are approximate and are based on site observations and map reviews.

Table 2 - Buildings within the Major Impact Area and Their Distances

Main Building / Structure	**Nearby Structure / Area**	**Approximate Distance (m)**
FU Atatürk Cultural Center	Campus pedestrian pathways, green areas	~20–50 m
FU Former Library	Faculty of Education classrooms, pedestrian pathways	~30–60 m
FU Computer Engineering, Metallurgical and Materials Engineering Building	Adjacent engineering buildings, pedestrian pathways	~20–40 m
FU Department of Electrical Engineering	Shared areas of the Faculty of Engineering	~25–50 m
FU Department of Civil Engineering	Student pedestrian routes, outdoor seating areas	~20–40 m
FU Department of Geological Engineering	Football field	~20 m
FU Chemical Engineering Laboratory	Sare Ana Female Student Dormitory	~90 m
FU Department of Mechanical Engineering	Engineering faculty inner courtyard, pedestrian pathways	~25–45 m

FU Mechanical Engineering Annex Building	Academic offices, campus internal road	~20–40 m
FU Guesthouse	Green areas, campus vehicle/pedestrian road	~30–60 m
FU Faculty of Engineering Dean's Office	Academic and administrative offices, pedestrian pathways	~20–40 m
FU Rectorate Building	Administrative units, ceremonial area, high pedestrian traffic areas	~30–70 m
FU Faculty of Technology Metal Workshop	Open areas surrounding workshops, campus internal road	~20–50 m
New Prefabricated Laboratory Building	Football field, open sports areas, pedestrian pathways	~10–40 m

In addition to the buildings within the subproject scope, users will be informed about the subproject through complaint boxes and posters providing information on the grievance mechanism to be placed in buildings located within the major impact area. The grievance boxes will be checked twice per week. Complaints collected will be reviewed within the scope of the grievance mechanism, and the process will be managed in accordance with the relevant procedures.

2. LEGAL FRAMEWORK AND COMPLIANCE WITH THE WORLD BANK ENVIRONMENTAL AND SOCIAL FRAMEWORK (ESF)

This section outlines the national and international regulations as well as World Bank measures that must be followed throughout the sub-project.

2.1.National Legislation

This Environmental and Social Management Plan (ESMP) has been primarily prepared in accordance with the Republic of Türkiye's legislation. The main framework for Türkiye's environmental legislation is the Environmental Law (Law No. 2872), published in the Official Gazette on 11 August 1983, and numbered 18132, and most recently revised respect to Article 20 regarding administrative fines in the Official Gazette dated 30 December 2025, No. 33123. This law is supported by regulations. Below are the national laws and regulations primarily referred to for assessing and preventing environmental and social impacts within the scope of this project:

1. Waste Management Regulation, published in the Official Gazette dated 2 April 2015, No. 29314, and amended in the Official Gazette dated 23 March 2017, No. 30016.
2. Regulation on the Control of Packaging Waste, published in the Official Gazette dated 26 June 2021, No. 31523.
3. Regulation on the Control of Excavation Soil, Construction, and Demolition Waste, published in the Official Gazette dated 18 March 2004, No. 25406, and amended in the Official Gazette dated 9 October 2021, No. 31623.
4. Regulation on Air Quality Assessment and Management, published in the Official Gazette dated 6 June 2008, No. 26898.
5. Regulation on the Prevention of Risks from Biological Agents, published in the Official Gazette dated 15 June 2013, No. 28678.
6. Zero Waste Regulation, published in the Official Gazette dated 12 July 2019, No. 30829, and amended in the Official Gazette dated 9 October 2021, No. 31623.
7. Regulation on the Control of Soil Pollution and Point-Source Contaminated Sites, published in the Official Gazette dated 8 June 2010, No. 27605, and most recently revised in the Official Gazette dated 11 July 2013, No. 28704.
8. Water Pollution Control Regulation, published in the Official Gazette dated 31 December 2004, No. 25687, and most recently amended in the Official Gazette dated 12 May 2023, No. 32188.
9. Environmental Noise Control Regulation, published in the Official Gazette dated 30 November 2022, No. 32029.
10. Regulation on Noise Emission from Equipment Used in Open Areas, published in the Official Gazette dated 30 December 2006, No. 26392, and amended in the Official Gazette dated 6 June 2017, No. 30088.

Within the scope of the project, in terms of occupational health and safety, priority effects will be considered in compliance with Law No. 4857 published in the Official Gazette dated 10 June 2003, No. 25134, and the Occupational Health and Safety Law No. 6331 published on 30 June 2012, along with the relevant regulations. The regulations that will primarily be referred to are listed below.

1. Regulation on Subcontractors, published in the Official Gazette dated 27 September 2008, No. 27010, and amended in the Official Gazette dated 25 August 2017, No.

30165.

2. Regulation on Health and Safety Measures in Asbestos Work, published in the Official Gazette dated 25 January 2013, No. 28539, and amended in the Official Gazette dated 16 January 2014, No. 28884.
3. Regulation on Manual Handling of Loads, published in the Official Gazette dated 24 July 2013, No. 28717.
4. Regulation on Occupational Health and Safety in Temporary or Fixed-Term Work, published in the Official Gazette dated 23 August 2013, No. 28744.
5. Regulation on Health and Safety Measures in Work with Chemicals, published in the Official Gazette dated 12 August 2013, No. 28733.
6. Regulation on the Use of Personal Protective Equipment in Workplaces, published in the Official Gazette dated 2 July 2013, No. 28695.
7. Regulation on Health and Safety Signs, published in the Official Gazette dated 11 September 2013, No. 28762.
8. Regulation on the Professional Training of Workers in Dangerous and Very Dangerous Jobs, published in the Official Gazette dated 13 July 2013, No. 28706, and amended in the Official Gazette dated 11 May 2017, No. 30063.
9. Regulation on Dust Control, published in the Official Gazette dated 5 November 2013, No. 28812.
10. Regulation on Occupational Health and Safety in Construction Works, published in the Official Gazette dated 5 October 2013, No. 28786, and amended in the Official Gazette dated 31 December 2018, No. 30642.
11. Regulation on the Protection of Workers from Noise-Related Risks, published in the Official Gazette dated 28 July 2013, No. 28721.
12. Regulation on the Procedures and Principles for Occupational Health and Safety Training of Workers, published in the Official Gazette dated 15 May 2013, No. 28648, and amended in the Official Gazette dated 24 May 2018, No. 30430.
13. Regulation on Health and Safety Conditions in the Use of Work Equipment, published in the Official Gazette dated 25 April 2013, No. 28628, and amended in the Official Gazette dated 18 February 2022, No. 31754.
14. Regulation on the Duties, Authorities, Responsibilities, and Training of Occupational Safety Experts, published in the Official Gazette dated 29 December 2012, No. 28512, and amended in the Official Gazette dated 6 July 2021, No. 31533.
15. Regulation on Occupational Hygiene Measurement, Testing, and Analysis Laboratories, published in the Official Gazette dated 24 January 2017, No. 29958.
16. Regulation on Occupational Health and Safety Services, published in the Official Gazette dated 29 December 2012, No. 28512, and amended in the Official Gazette dated 6 July 2021, No. 31533.
17. Regulation on Occupational Health and Safety Risk Assessment, published in the Official Gazette dated 29 December 2012, No. 28512.
18. Regulation on Emergency Situations in Workplaces, published in the Official Gazette dated 18 June 2013, No. 28681, and amended in the Official Gazette dated 1 October 2021, No. 31615.
19. Regulation on Stopping Work in Workplaces, published in the Official Gazette dated 30 March 2013, No. 28603, and amended in the Official Gazette dated 11 February 2016, No. 29621.
20. Regulation on the Duties, Authorities, Responsibilities, and Training of Workplace Doctors and Other Health Personnel, published in the Official Gazette dated 20 July 2013, No. 28713, and amended in the Official Gazette dated 6 July 2021, No. 31533.
21. Regulation on Health and Safety Measures in Work with Screen-Based Equipment,

published in the Official Gazette dated 16 April 2013, No. 28620.

22. Regulation on the Protection of Workers from Vibration-Related Risks, published in the Official Gazette dated 22 August 2013, No. 28743.
23. Regulation on the Support of Occupational Health and Safety Services, published in the Official Gazette dated 24 December 2013, No. 28861.
24. Regulation on Occupational Health and Safety Boards, published in the Official Gazette dated 18 January 2013, No. 28532.
25. Regulation on Health and Safety Measures to be Taken in Workplace Buildings and Appendices, published in the Official Gazette dated 17 July 2013, No. 28710.
26. Regulation on the Working Conditions of Pregnant or Breastfeeding Women and the Establishment of Nursing Rooms and Child Care Dormitories, published in the Official Gazette dated 16 August 2013, No. 28737, and amended in the Official Gazette dated 7 September 2019, No. 30881.
27. Regulation on the Working Conditions of Women Workers in Night Shifts, published in the Official Gazette dated 24 July 2013, No. 28717, and amended in the Official Gazette dated 19 August 2017, No. 30159.
28. Freedom of Information Law, published in the Official Gazette dated 24 October 2003, No. 25269.

During the employment of all workers, the basic insurance rights will be determined in accordance with the Social Insurance and General Health Insurance Law No. 5510, dated 16.06.2006.

Additionally, the Environmental Impact Assessment (EIA) Regulation, published under Article 10 of the Environmental Law, was first issued in the Official Gazette dated 7 February 1993, No. 21489, and was last revised and published in the Official Gazette dated 29 July 2022, No. 31907. Since the construction areas will be existing public buildings, the project is not subject to the EIA regulation.

Significant social and environmental impacts that may arise due to the project are likely to affect sensitive receptors located near the project site. In this context, the careful management of ESMPs and OHS activities will be sufficient to mitigate environmental and social impacts.

2.2.National Agreements

1. Council Directive 89/391/EEC of 12/6/1989 on Measures to Improve the Health and Safety of Workers
2. International Labor Organization (ILO) Convention No. 155 on Occupational Health and Safety and the Working Environment
3. ILO Convention No. 161 on Occupational Health Services
4. ILO Convention No. 187 on the Framework Agreement on the Development of Occupational Health and Safety
5. ILO Convention No. 167 on Safety and Health in the Construction Sector
6. United Nations Framework Convention on Climate Change
7. Paris Agreement (Climate Change)
8. Convention on Long-Range Transboundary Air Pollution

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

Throughout all stages of the project, compliance will be ensured with the requirements of the World Bank Environmental and Social Framework[1] (ESF) and the relevant Environment, Health, and Safety (EHS) Guidelines[2], in addition to national legislation.

The Environmental and Social Standards (ESS), summarized in Annex II, are components of the World Bank Environmental and Social Framework (ESF) and outline the requirements for the project owner regarding the identification and assessment of environmental and social risks and impacts related to 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 - Applicability of the World Bank Environmental and Social Standards to the Project

Environmental and Social Standards	Uygulanabilirlik
ESS1: Environmental and Social Risk and Impact Assessment and Management	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, Land Use Restrictions, and Involuntary Resettlement	No[3]
ESS6: Conservation of Biodiversity and Sustainable Management of Living Natural Resources	No[4]
ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	No[5]
ESS8: Cultural Heritage	Yes
ESS9: Financial Intermediaries	No[6]
ESS10: Stakeholder Engagement and Information Disclosure	Yes

[1] https://www.worldbank.org/en/projects-operations/environmental-and-social-framework

[2] 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

[3] There will be no interaction with natural resources and/or biodiversity elements due to any activities carried out within the scope of the project.

[4] "The activities to be implemented under the project will not have any interaction with natural resources and/or biodiversity elements."

[5] No indigenous group meeting the definition provided in ESS7 can be found in Turkey.

[6] Since no financial intermediary is involved in this project, ESS9 will not be applicable to this project.

3. ACTIVITIES TO BE CARRIED OUT UNDER THE PROJECT

Summary technical information on the structural strengthening and energy efficiency works to be carried out in the buildings located on the Fırat University campus is provided in Table 4.

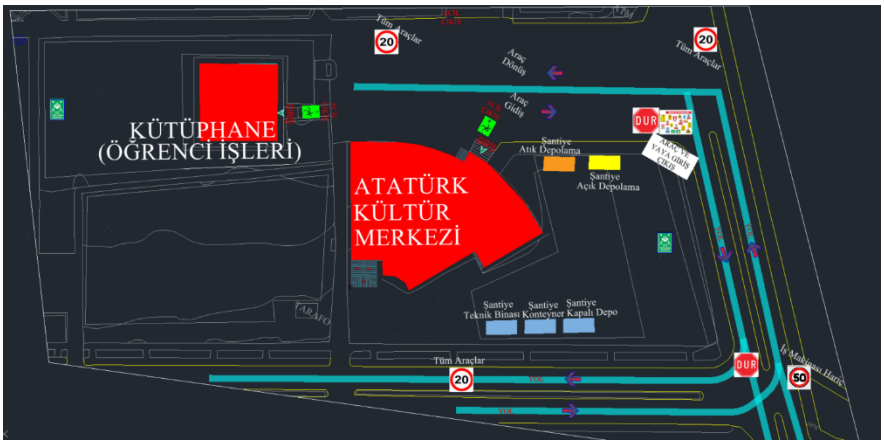
This ESMP will be accessible to all stakeholders throughout the project lifecycle at construction sites and on the project website (https://kamuguclendirme.csb.gov.tr/). In addition, to ensure that stakeholders participate in the information meeting with adequate knowledge of the project, the draft ESMP was disclosed 18 days prior to the meeting in the project buildings within the university campus, on the official project website (https://kamuguclendirme.csb.gov.tr/), and on the Fırat University website (https://www.firat.edu.tr/tr).

One full-time environmental specialist, one social specialist, and one occupational health and safety (OHS) specialist will be employed within the Contractor's organization; similarly, one environmental specialist, one social specialist, and one OHS specialist have been assigned within the Construction Supervision Consultant. The Consultant, the Contractor, and the Ministry's Project Implementation Unit (PIU) are responsible for recording and responding to questions and feedback from stakeholders concerning environmental, social, and OHS matters.

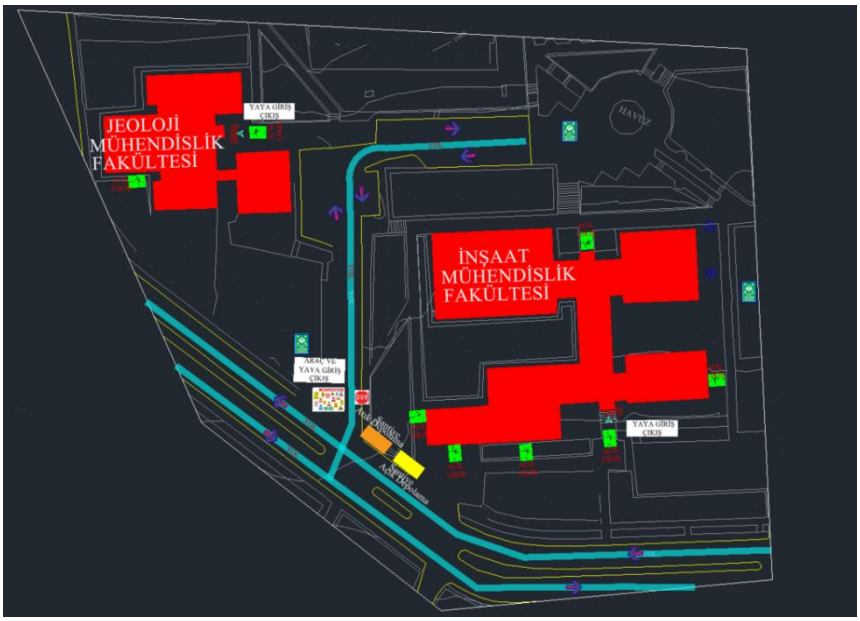
3.1. Field Works

Table 4 - Summary Information on the Activities to be Carried Out

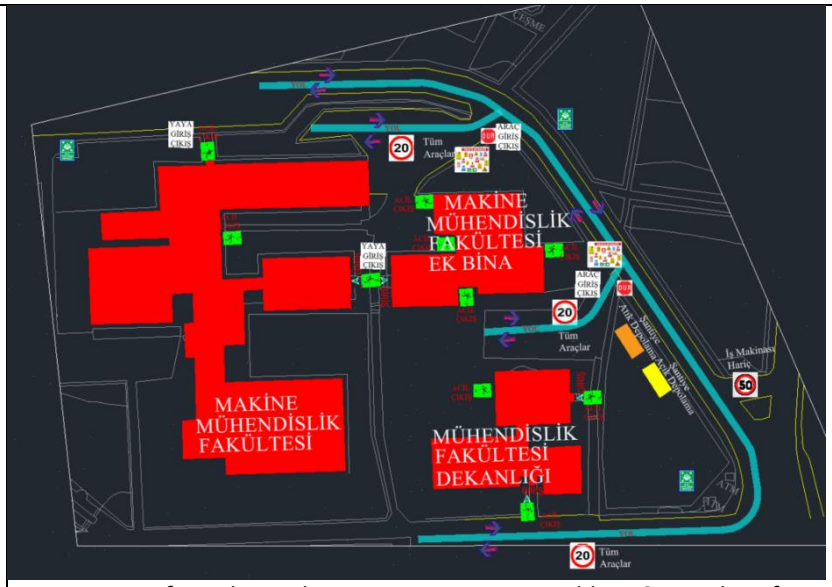
WORK ON SITE	
DESCRIPTION OF THE GEOGRAPHICAL, PHYSICAL, BIOLOGICAL, GEOLOGICAL, HYDROGRAPHIC AND SOCIO-ECONOMIC CONTEXT	 *Fırat University General View – 1*  *Fırat University General View – 2*  *Fırat University General View – 3* During the implementation of the project activities (such as scaffold installation, painting, exterior cladding, etc.), the soil around the buildings is expected to be affected by the construction activities. Necessary measures will be taken to prevent hazardous chemicals from contaminating the soil during the works to be carried out in this area. The measures to be taken for the management of the potential environmental and social

	impacts and risks of the project are presented in detail in Section 5. No problems are foreseen in accessing the project area. All infrastructure facilities required for the works, such as electricity, water, sewerage, natural gas, and internet, are available.
LOCATIONS AND DISTANCES OF THE NEAREST SENSITIVE RECEPTORS SUCH AS HOSPITALS, HEALTH UNITS, PUBLIC BUILDINGS, AND HOUSES	The project site comprises 13 buildings located within the Fırat University campus in Elazığ. Most of the strengthening and improvement works will be carried out inside the buildings. However, potential adverse impacts of construction activities on nearby settlements will be controlled and managed through the mitigation measures presented in this ESMP. Direct impacts on buildings other than the one where construction is being undertaken are not expected. The major impact areas are located within the campus and include receptors such as educational facilities, a mosque, cafeteria facilities, dormitories, a kindergarten, parks, and green areas. Noise, dust, vibration, the potential spread of excavation waste beyond the construction site, and possible issues related to waste management may adversely affect building users. Detailed information on these matters and the mitigation measures to be implemented are provided in Section 5. Additionally, building management will be informed at least seven (7) days prior to each phase of construction activities. The construction schedule will be displayed on-site in a location visible to stakeholders and will be continuously updated throughout the project duration.
TRAFFIC ACTION PLAN	Considering the activity area and its surroundings, no problems are anticipated during the transportation of materials required for construction activities. Access routes and rules are specified in the Traffic Action Plan, which is included in the Occupational Health and Safety Plan prepared by the Consultant. In addition, the Contractor will prepare a Community Health and Safety and Traffic Management Plan prior to the commencement of construction works. Traffic warning signs will be placed at vehicle entry points and security checkpoints at the construction site; access will be controlled for both pedestrians and vehicles, gates will remain closed when there is no entry or exit, and security personnel will be stationed at the entrance. Maps showing traffic routes and traffic management plans are provided below.  *Atatürk Cultural Center and Library Traffic Action Plan*

Computer Engineering, Metallurgical and Materials Engineering Building Traffic Action Plan

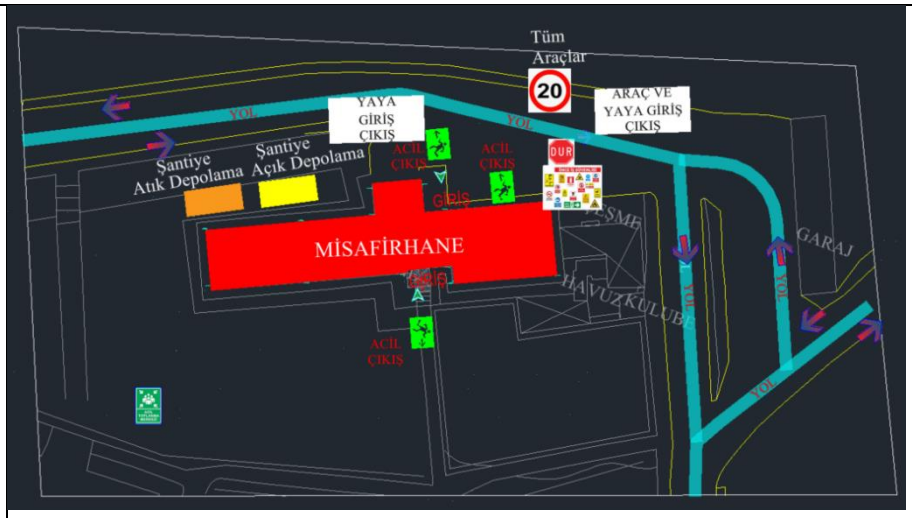


Department of Civil Engineering & Department of Geological Engineering Traffic Action Plan

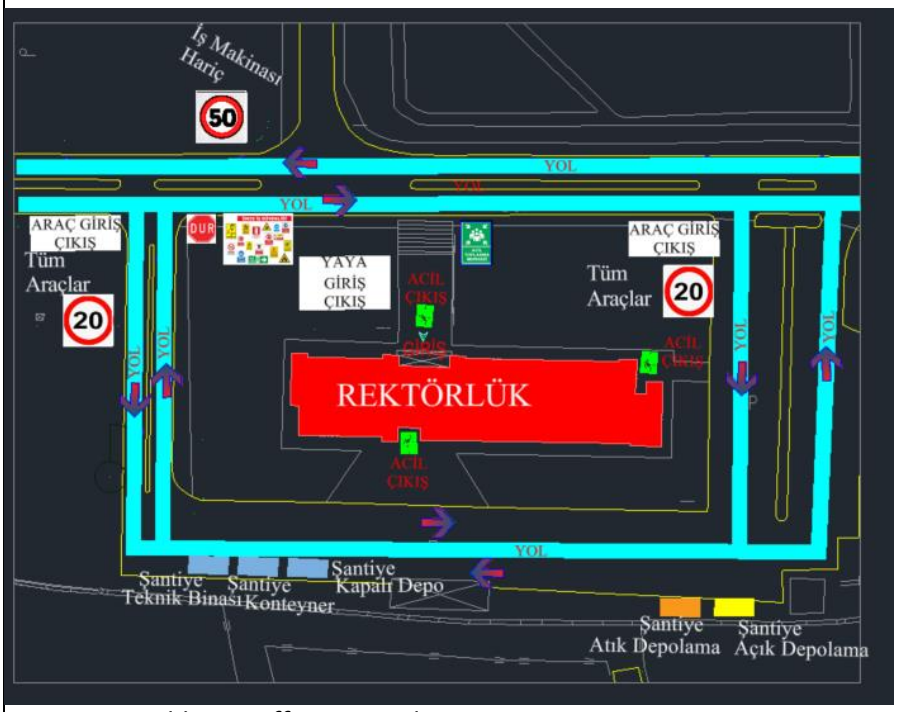


Department of Mechanical Engineering, Annex Building & Faculty of Engineering Dean's Office Traffic Action Plan

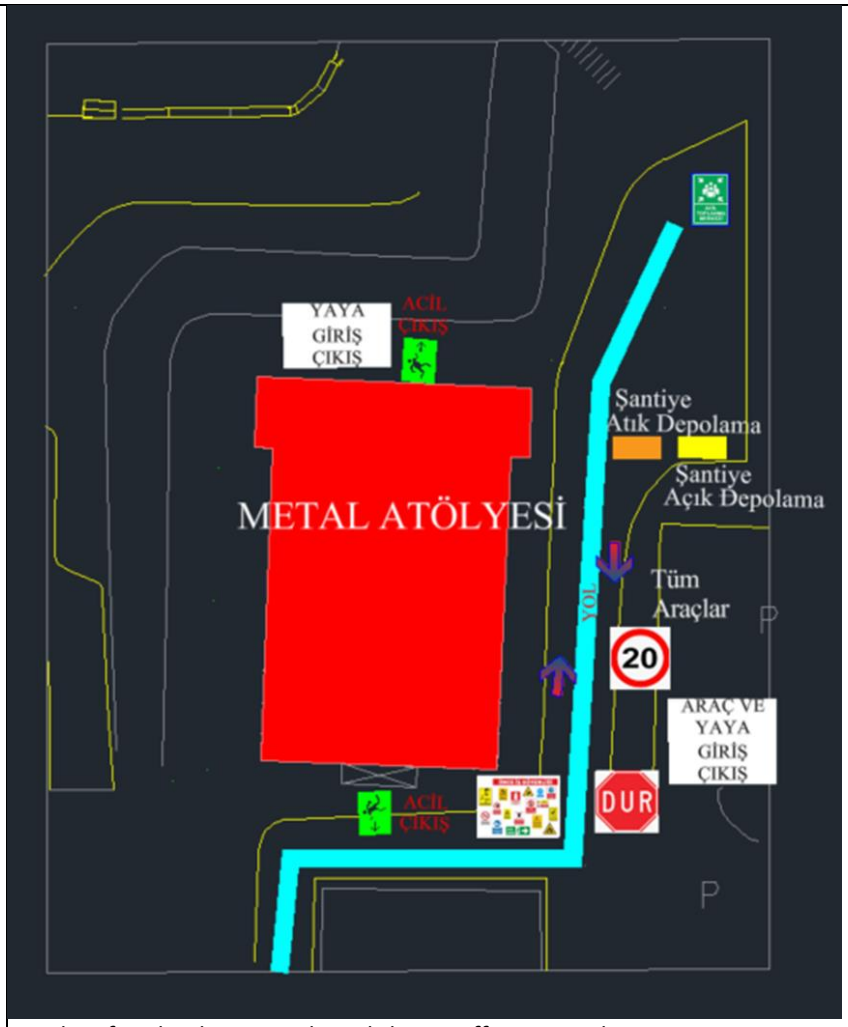
Chemical Engineering Laboratory Traffic Action Plan



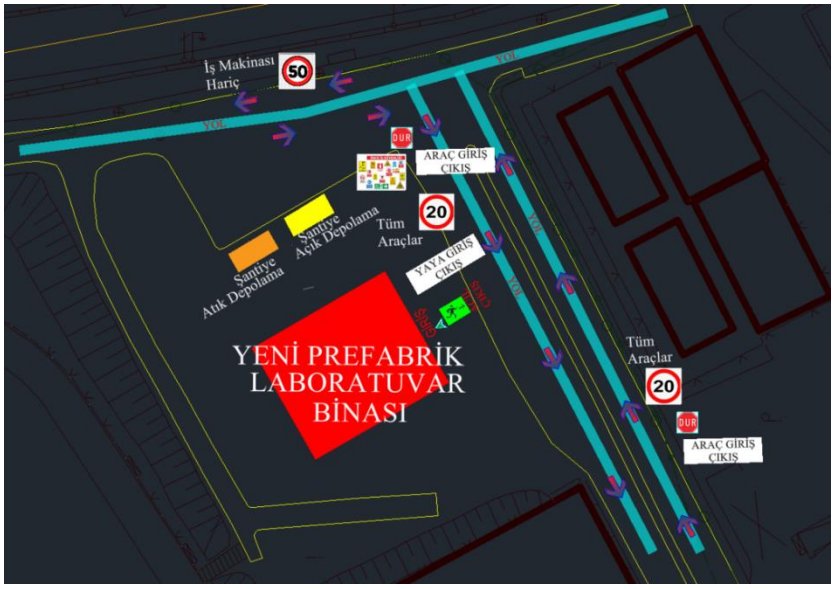
Guesthouse Traffic Action Plan



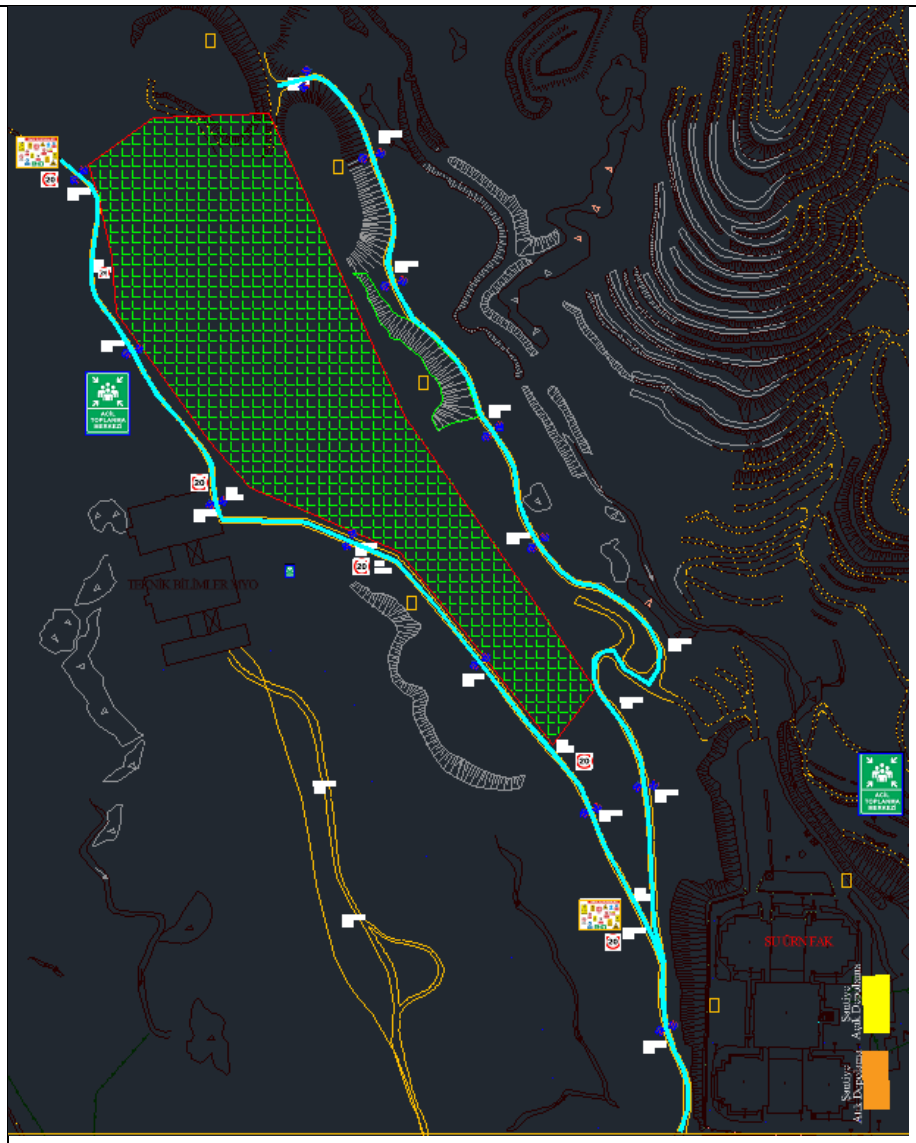
Rectorate Building Traffic Action Plan



Faculty of Technology Metal Workshop Traffic Action Plan



Traffic Action Plan for the New Prefabricated Laboratory Building



Traffic Action Plan for the Ground-Mounted PV Plant at Fırat University

Site Layout Plan of Fırat University Buildings

1	FU Atatürk Cultural Center
2	FU Library
3	FU Computer Engineering, Metallurgical and Materials Engineering Building
4	FU Department of Electrical Engineering
5	FU Department of Civil Engineering
6	FU Department of Geological Engineering
7	FU Chemical Engineering Laboratory
8	FU Department of Mechanical Engineering
9	FU Mechanical Engineering Annex Building
10	FU Guesthouse
11	FU Faculty of Engineering Dean's Office
12	FU Rectorate Building

	13 — FU Faculty of Technology Metal Workshop 14 — New Prefabricated Laboratory Building 15 — Ground-Mounted PV Plant
SEWERAGE SYSTEM, ELECTRICITY, WATER NETWORK, ETC. INFRASTRUCTURES USED BY THE PROJECT	During the construction works, the existing sewage, electricity, and water networks in the area will be used with the approval of the Beneficiary Institution. After obtaining the approval of the Beneficiary Institution, the Contractor will carry out meter readings and pay the usage fee. Domestic waste will be disposed of by utilizing municipal services, while temporary storage areas will be established for other waste, and their disposal will be ensured by licensed companies. In case any specific infrastructure service is required for the project (such as vacuum truck service in case of overflow due to blockage in sewerage lines, mobile generator in case of long-term power outage, or water tanker for dust suppression in case of long-term water outage), the existing infrastructure facilities will be utilized and implemented in accordance with the relevant regulations.
NATIONAL LEGISLATION AND PERMITS APPLICABLE TO THE PROJECT ACTIVITY (E.G., PV INSTALLATION, ETC.)	The existing Building Permits will be used for the unlicensed electricity generation application of the Photovoltaic Solar Power Plant (PV). The documents to be obtained for Unlicensed Electricity Generation include but are not limited to the following: • Documents required by the Authorized Electricity Distribution Company for the Call Letter ▪ Unlicensed generation connection application form ▪ Subscriber number (non-mobile) ▪ Receipt showing that the application fee has been deposited into the account of the relevant network operator ▪ Single Line Diagram showing the technical specifications of the facility to be installed ▪ PV Technical Evaluation Form and personnel program prepared by the General Directorate of Renewable Energy ▪ Approved coordinate application sketch ▪ Title Deed for Ground-Mounted applications • Structural Project Approval of the PV system • "Connection Opinion" and "Call Letter for Connection Agreement" to be obtained from the relevant distribution company • System Basic Information Form • Technical project and calculations, District Municipality – PV Compliance Letter (according to Zoning Regulation Legislation) Within the scope of the "Regulation on Unlicensed Electricity Generation in the Electricity Market," the application for photovoltaic panel installation will be submitted online to the authorized electricity distribution company by the Consultant.
STAKEHOLDER ENGAGEMENT PROCESS	
STAKEHOLDER ENGAGEMENT PROCESS	Prior to the implementation of the prepared and approved projects, a stakeholder engagement meeting will be organized with the participation of all stakeholders in order to provide information on the technical, social, and environmental aspects of the project by relevant specialists, to respond to participants' questions, to obtain their views, and to disclose this ESMP to stakeholders following its approval by the Administration and the World Bank. Online participation will also be made available for those unable to attend the meeting physically. During the meeting, participants will be informed by relevant specialists about the technical, social, and environmental aspects of the project, and they will be given the opportunity to ask questions and provide feedback regarding the Subproject. Prior to the information meeting, this ESMP was disclosed for a period of 18 days on

	both the project website (https://kamuguclendirme.csb.gov.tr/), the Fırat University website (https://www.firat.edu.tr/tr), and at the construction site to ensure stakeholder access. The ESMP remained accessible to all stakeholders throughout the project lifecycle both on the relevant websites and at construction sites. In addition, printed copies of the ESMP were made available in the project buildings for stakeholder access 18 days prior to the stakeholder engagement meeting. Stakeholder engagement under the project is not limited to a single meeting. It will be treated as a continuous process extending from the pre-construction preparation phase through the entire project duration. Before construction activities commence, the Consultant's social specialist will conduct informational meetings with nearby residents, users, and representatives of relevant institutions regarding the project and its expected impacts, collect initial feedback and expectations from stakeholders, and introduce the grievance mechanism. Following the commencement of construction, these engagements will be regularly maintained by the Contractor's social specialist, ensuring timely communication with stakeholders on matters such as noise, dust, access arrangements, and working hours. Feedback collected from the field will be recorded and managed through an integrated process linked with the grievance mechanism. The Consultant's social specialist will monitor and verify these engagements and the information disclosure process. Through these measures, stakeholders will have uninterrupted access to information and feedback channels throughout the construction period, ensuring that stakeholder engagement is conducted as a comprehensive process rather than being limited to a single meeting. Details regarding the project-specific grievance mechanism and stakeholder engagement meeting are provided in Section 4.
ISSUES AND CONCERNS RAISED BY THE BUILDING USERS	As of the date this report was prepared, written/verbal feedback and complaints regarding the project received through the project Grievance Mechanism are shared with the Administration on a weekly basis. The issues and concerns raised by building users, such as building staff and visitors, regarding these works as well as any concerns related to the ESMP, were raised during the ESMP-related stakeholder engagement meetings. These issues and concerns were recorded through the stakeholder engagement meeting minutes, and stakeholders' views, suggestions, and concerns will be reflected in this document in Annex 6.
PLACEMENT OF GRIEVANCE BOXES	Complaint boxes have been placed at accessible locations within the campus for the 13 buildings covered under this ESMP. Accordingly, a total of four (4) complaint boxes has been installed at the entrance of the Atatürk Cultural Center, the entrance of the Department of Civil Engineering building, the entrance of the Rectorate Building, and at the Student Cafeteria/Photocopy Center (near the Civil, Metallurgical, and Mechanical Engineering Laboratories). 

INSTITUTIONAL CAPACITY BUILDING	
TRAINING	Within the scope of the project, because of the training to be provided by the Consultant to the Contractor's personnel, the institutional capacity of the Contractor company is expected to improve. Through the trainings, the control of the expected and actual performance of the Contractor will be ensured by the Consultant. These training courses are listed below. • Environmental and Social Impacts • Waste Management • Efficient Use of Resources • Response to Environmental Emergencies • Energy Efficiency • Stakeholder Engagement/Information Activities • Grievance Mechanism (GM) • Gender Equality / Gender-Based Violence / Sexual Exploitation / Sexual Assault / Sexual Harassment • Code of Conduct • Protection of Cultural Heritage • OHS Plan Implementation and Monitoring Training • Lockout and Tagout Training • Work Permit System Training

4. STAKEHOLDER ENGAGEMENT AND GRIEVANCE MECHANISMS (GM)

A stakeholder is any individual, institution, or group that may be directly or indirectly affected—positively or negatively—by the activities carried out and outcomes generated throughout the lifecycle of a project, or that may have any form of interest or involvement in the project. Identifying relevant stakeholders is essential to ensuring a meaningful participation process, and these stakeholders may be updated throughout implementation beginning from the project's inception.

Stakeholder engagement is an inclusive and dynamic process conducted throughout the project lifecycle that ensures stakeholders' views are considered and that corrective measures are taken against any potential adverse impacts that may arise. The process prioritizes the provision of information to stakeholders regarding project activities and the maintenance of continuous communication. Stakeholder engagement supports the establishment of strong, constructive, responsive, and interaction-based working relationships that are critical for the successful management of environmental and social risks and impacts.

This ESMP has been prepared in alignment with the SREEPB Project Stakeholder Engagement Framework (SEF), which defines the general characteristics of all stakeholders. From the period prior to construction activities and throughout the entire subproject duration at the Fırat University sites in Elazığ, potentially affected parties are informed about publicly available information—such as project scope, contact details, and the Grievance Mechanism (GM)—through stakeholder engagement meetings, informational materials (posters and brochures), the SREEPB website, and social media channels. Through these methods, early, frequent, and transparent communication is ensured throughout the project lifecycle, enabling the prevention and management of risks, potential disputes, and delays. In this way, stakeholder expectations can be identified in a timely manner, maximizing potential contributions to the project.

Considering that the Fırat University campus will remain actively engaged in educational and social activities throughout subproject implementation, communication with stakeholders conducted by the Contractor and the Consultant will be handled with site-specific sensitivity. Accordingly, building users, academic and administrative personnel, students, and sensitive receptor groups within the major impact area (e.g., kindergarten, dormitory, and green area users) will be regularly informed during construction activities; face-to-face meetings will be conducted when necessary, and grievance mechanisms will be actively implemented. Attention will be given to areas where children are present, such as the kindergarten, including planning measures to mitigate dust, noise, and vibration impacts, and to protect children's daily routines, use of open spaces, and safe mobility areas. Through regular and proactive communication conducted by the Contractor and the Consultant, the early identification of potential social impacts and the timely implementation of preventive/corrective measures are targeted.

Following the approval of this ESMP, a Stakeholder Engagement Meeting was held on 05.02.2026 within the scope of the subproject, with the participation of the Consultant firm, management and technical units of the Beneficiary Institution, building users, and environmental specialists, social specialists, OHS specialists, structural experts, civil engineers, and other relevant personnel from the Project Implementation Unit (PIU). During the meeting, relevant specialists provided information on technical, social, and environmental details prior to the implementation of the

approved subproject, responded to participants' questions, and received their feedback.

A total of 145 participants attended the Stakeholder Engagement Meeting, including 136 in person (48 women and 88 men) and 9 online (2 women and 7 men). Details regarding the meeting are provided in Annex 6. This subproject-specific ESMP was posted in the buildings within the scope of Group-1 on 19.01.2026 and remained disclosed for the 18-day period leading up to the meeting date.

This subproject-specific ESMP was disclosed on the SREEPB Project website (https://kamuguclendirme.csb.gov.tr/) and the Fırat University website (https://www.firat.edu.tr/tr), and posted at the construction sites within the subproject scope, for a period of eighteen (18) days prior to the Stakeholder Engagement Meeting in order to ensure that all stakeholders were informed about how the subproject process would be implemented on site and to allow them to submit any objections or suggestions. The ESMP was displayed at the construction sites and will remain publicly accessible throughout the project lifecycle both digitally and physically on site, together with the grievance boxes.

4.1.Grievance Mechanism (GM)

Grievance Mechanism (GM) aims to provide affected or interested parties with access to an effective procedure. Grievances may indicate stakeholder concerns, and if not identified and resolved, they may escalate. Identifying and responding to grievances supports the development of positive relationships among project personnel, local communities, and other stakeholders.

Before the implementation of the SREEPB Project, the Ministry of Environment, Urbanization and Climate Change PIU developed a transparent and comprehensive GM specifically for the SREEPB Project to receive, evaluate, and resolve grievances/opinions/suggestions that may arise during activities to be carried out in public buildings. The GM will assist all relevant stakeholders in conveying their grievances/opinions/suggestions regarding the planned activities to the appropriate persons and institutions, and it will strengthen stakeholders' engagement in the project.

This mechanism also enables all personnel involved in the project (PIU, Consultant, Contractor) to submit their grievances/opinions/suggestions—either anonymously or under their name—to the Ministry and the World Bank. The duties and responsibilities of the Contractor, Consultant, and PIU are detailed in the Project's Stakeholder Engagement Framework (chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894_sef_final-may_20210521121600.pdf

Additionally, all parties involved in the project are required to implement the Project's Environmental and Social Management Plan, Stakeholder Engagement Framework, and Labor Management Procedure.

Under the SREEPB Project, grievances will be addressed at multiple levels:

a) Contractor Level: The Project Manager and Social Specialist of each contractor assigned to carry out the construction works shall be responsible for receiving, recording, and, if possible, resolving grievances/concerns/opinions/suggestions raised by any stakeholder (such as public building administration, building users, visitors, local communities, or beneficiaries, project personnel, etc.) through the Grievance and Suggestion Form and the Grievance Closure Form provided in Annexes 4 and 5, and in accordance with the Grievance Mechanism Procedure.

Verbal grievances, opinions, and suggestions shall be recorded by the responsible personnel of the Contractor (Social Specialist and Project Manager) by filling out the Grievance and Suggestion Form.

The Contractor shall ensure that all personnel working on the Project are aware that they can use the Grievance Mechanism (GM), and shall guarantee that any grievances raised by staff will not constitute an obstacle to the future renewal of their employment contract.

All steps related to the submission of employee grievances/opinions/suggestions are described in detail under the section "Grievance Mechanism for Workers" of the SREEPB Project Labor Management Procedures. All employees may use this mechanism either under their name or anonymously.

If the Contractor is unable to resolve grievances/concerns/opinions/suggestions related to construction activities under the SREEPB Project, they shall be obliged to refer such submissions to the relevant persons/institutions in accordance with the Project's Grievance Mechanism Procedure.

Contractors shall also report the records they keep—including resolved and unresolved grievances/concerns/opinions/suggestions—on a weekly basis to the Consultant. The Contractor shall be responsible for resolving grievances within 15 calendar days at the latest and shall inform the Consultant's Social Specialist throughout the process.

b) Consultant Level: Grievances/concerns/opinions/suggestions that cannot be addressed at the contractor level shall be handled by the Social Specialist of the Construction Supervision Consultant Firm. The Project Manager and the Social Specialist, in accordance with the Grievance Mechanism Procedure, shall prepare a situation report to remind the contractor of their responsibilities and ensure that necessary measures are taken to resolve the issue and implement the required corrective actions.

The Consultant shall guarantee that all personnel working on the Project are entitled to use the GM and that any problems submitted by staff will not pose a risk to the future renewal of their employment contracts. If the Project Manager is unable to resolve grievances/ concerns/suggestions, they shall be obliged to refer them to the Ministry of Environment, Urbanization and Climate Change.

The Consultant Firm is responsible for resolving grievances within 15 calendar days at the latest, recording grievances in the grievance log, and closing/resolving the grievance through the Grievance Closure Form. Regardless of whether the grievance falls within the scope of the Project, the Consultant is obliged to carry out all relevant official correspondence and inform the Employer.

The Consultant shall submit both the grievances/concerns/suggestions received directly and those reported by the contractor to the Ministry of Environment, Urbanization and Climate Change on a weekly basis in the form of reports/grievance logs.

c) Provincial Directorates of MoEUCC Level: Regarding activities carried out under the SREEPB Project, the relevant Provincial Directorate of the Ministry of Environment, Urbanization and Climate Change (MoEUCC) shall be responsible, to the extent possible, for addressing grievances/opinions/suggestions received. Regardless of whether the Directorate resolves the issues, it shall promptly forward all grievances/concerns/ opinions/suggestions it receives to the Employer.

d) MoEUCC Project Implementation Unit (PIU) Level: Within the scope of the SREEPB Project, MoEUCC shall be responsible for collecting, recording, and resolving all grievances/concerns/ opinions/suggestions raised by stakeholders through the levels mentioned above. MoEUCC shall resolve the collected grievance/concern/opinion/suggestion within 15 calendar days and inform the submitter of the outcome. However, for grievances requiring detailed examination, this period may be extended to 30 calendar days. MoEUCC is also responsible for submitting grievance records to the World Bank in the 6-monthly progress reports. Additionally, the Ministry is required to report cases of gender-based violence/harassment and occupational accidents to the World Bank within 48 hours.

For grievances related to gender-based violence and sexual exploitation and abuse, it is recommended to use the web-based grievance system provided in Annex III, which allows anonymous submissions. To ensure confidentiality, access to this web-based grievance system shall be restricted to authorized personnel only.

In addition to the Grievance Mechanisms defined at various levels above, stakeholders may also use the national grievance mechanism channels throughout the project duration.

The channels for submitting grievances and suggestions to the Employer, primarily the Presidential Communication Center of the Republic of Türkiye (CİMER), are provided below.

Table 5 - GM Communication Channels

Çağrı Merkezi	: ALO 181
Telefon	: 0312 586 4858
E-mail	: yigmkadev@csb.gov.tr
Şikâyet	: https://kadevoneri.csb.gov.tr/oneri.jsp
	Suggestion and grievance boxes installed in buildings

For grievances related to gender-based violence (GBV) and sexual exploitation and abuse (SEA), the use of a web-based grievance system that allows anonymous submissions is recommended. To ensure confidentiality, access to the web-based grievance system shall be granted only to authorized personnel.

In addition to the grievance mechanisms defined above at various levels, stakeholders may also use the national grievance mechanism channels, the details of which are provided below, throughout the duration of the Project. The national grievance mechanisms are listed below:

Table 6 - CİMER Communication Channels

Webite	: https://www.cimer.gov.tr
	https://giris.turkiye.gov.tr
Helpline	: Alo 150
Mail adress	: T.C. Cumhurbaşkanlığı Külliyesi 06560 Beştepe - Ankara
Tel	0312 590 20 00
Fax	0312 473 64 94

Table 7 - YİMER Communication Channels

Web site	: https://yimer.gov.tr
Helpline	: Alo 157
Mail adress	: Çamlıca Mahallesi 122. Sokak No: 4 Yenimahalle/ANKARA
Tel	0312 157 11 22
Fax	0312 920 06 09

These communication channels are promoted through wall posters (placed on walls where suggestion & grievance boxes are located) in all buildings and through distributed project brochures. Additionally, all project personnel are responsible for informing stakeholders around them about the suggestion and grievance mechanisms. All workers will be informed about this subject prior to the commencement of their work.

Details on this topic are explained in the Stakeholder Engagement Framework (SEF) (https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894_sef_final-may_20210521121600.pdf)

Records regarding grievances/opinions/suggestions will be regularly shared by MoEUCC with the World Bank (WB). Additionally, any person or community who believes they have been adversely affected by projects supported by the WB may submit grievances through the existing project-level Grievance Mechanism (GM) to MoEUCC, or directly to the WB via the Independent Inspection Panel

(https://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service)

Stakeholders affected by the project may also submit grievances to the WB Independent Inspection Panel. This panel determines whether the complainants have suffered or may suffer harm as a result of the WB's failure to comply with one or more of its performance standards. The panel may convey its concerns regarding grievances it receives directly to the WB. At this stage, the WB is given the opportunity to respond to the grievances.

For information on how to submit grievances to the WB Inspection Panel, please visit: www.inspectionpanel.org

4.2.Grievance Mechanism for Workers

The grievance mechanism for workers should include:

(i) a procedure describing the flow of the grievance mechanism.
(ii) timeframes for responding to and resolving grievance cases.
(iii) a register to record and track the resolution process in a timely manner.
(iv) contact person responsible for collecting, recording, addressing, and tracking the resolution process of grievances.

The Consultant shall monitor the recording and resolution of grievances by contractors and report them to the PIU in the monthly progress reports. The process shall be overseen by the Social Specialist of the PIU.

This mechanism shall be based on the following principles:

- The process should be transparent and allow employees to express their concerns and submit grievances.
- No discrimination shall be made against those who submit grievances, and all grievances shall be handled in accordance with the principle of confidentiality.
- Anonymous grievances shall be treated equally to other grievances with known origins.
- Management shall take grievances seriously and respond with timely and appropriate actions.

Information on the existence of the grievance mechanism shall be communicated to all project workers (direct hires, contracted staff) through notice boards, suggestion/grievance boxes placed in appropriate locations, call centers, announcements during trainings, seminars, meetings, a link on the homepage of the project website, printed project materials distributed to social service personnel, social media, and other communication channels deemed necessary.

The project grievance mechanism shall not prevent project workers from exercising their legal rights under other judicial or administrative channels

5. ENVIRONMENTAL AND SOCIAL RISKS & IMPACTS AND MITIGATION MEASURES

Within the scope of this Subproject, structural strengthening and energy efficiency–focused improvement works and the construction of a laboratory building to be carried out in buildings located on the Fırat University campus in the Central District of Elazığ Province are expected to generate both direct and indirect positive environmental and social impacts. Direct positive social impacts include enhanced life and property safety for building users through the provision of earthquake-resilient and safe structures, the continuity of educational and administrative services within the university campus following a potential earthquake, and the sustained delivery of public services. Indirect positive impacts may be summarized as improved indoor comfort using energy-efficient building components, improved heating, ventilation, and lighting conditions, the creation of more accessible physical environments for people with disabilities, and energy savings accompanied by reductions in air pollutants.

The physical work to be carried out under the Subproject is not expected to result in irreversible adverse environmental impacts. Potential environmental and social impacts are anticipated to be temporary, reversible, and moderate in scale and nature. The project site is not located within environmentally sensitive areas, and significant adverse impacts on human health or the environment are not expected. As the activities will be implemented within the boundaries of the existing university campus, the project does not involve land acquisition or involuntary resettlement.

During the strengthening and improvement activities, the buildings within the project scope will be temporarily vacated by Fırat University, and educational and administrative activities of building users will continue in other existing buildings within the campus. The temporary relocation process will be implemented in accordance with the relocation plan prepared under the coordination of the Beneficiary Institution, with alternative on-campus spaces identified for all affected units. Accordingly, academic and administrative operations will continue within campus boundaries, and no permanent displacement, income loss, or relocation outside the campus is anticipated. While limited and short-term changes in daily spatial arrangements for building users may occur due to temporary relocation, these impacts are assessed as manageable and temporary.

To prevent disruption to teaching and learning activities during construction, Fırat University has developed an internal campus rotation plan. Accordingly, the Faculty of Engineering Dean’s Office and its affiliated administrative units will operate from the Faculty of Architecture and the Foreign Languages Building. Educational activities of the Departments of Computer, Mechanical, Electrical-Electronics, Geological, Metallurgical and Materials, and Mechatronics Engineering will be conducted in available conference halls, faculty buildings, and within the Vocational School of Technical Sciences. Laboratory-intensive education and research activities will utilize the Bioengineering and Chemistry Department buildings, while some departments, such as Civil Engineering, will conduct instruction in conference halls due to large student numbers. Upon completion of the new prefabricated laboratory building, the chemistry laboratory will be relocated there. Academic staff will be provided with office space in the Architecture Building, and departmental administrative offices will also be located there. The Prof. Dr. Mustafa Temizer

Conference Hall, Prof. Dr. Bahaeddin Ögel Conference Hall, Faculty of Dentistry Conference Hall, and Library Conference Hall will be used for educational activities.

Administrative and service activities related to the guesthouse, rectorate, and cultural facilities will also be maintained in alternative locations identified within the university campus, ensuring that all educational activities remain within campus boundaries. Guesthouse services will be provided at the guesthouse of the Fırat University Agriculture and Livestock Research and Application Center. For the Rectorate, the Faculty of Dentistry building will enter service in January, and the physical spaces currently used by the Faculty of Dentistry will be utilized by units formerly located in the Rectorate building. As the building contains academic offices and administrative units, patients will not be affected by this rotation. The Beneficiary Institution will inform students and academic staff in a timely manner through digital channels and administrative personnel.

During construction activities, certain risks to community health and safety may arise due to increased traffic movement, dust, noise, waste generation, and vibration. These risks are anticipated to particularly affect pedestrian and vehicle traffic within the campus. Such impacts will be mitigated through measures including controlled fencing of construction areas, regulation of working hours, implementation of traffic action plans, and advance notification to building users. Other potential adverse social impacts identified beyond community health and safety are limited and are considered manageable through the mitigation measures defined within this ESMP.

No risk of temporary or permanent income loss for commercial enterprises is anticipated under the Subproject. Relocation, evacuation, and temporary settlement processes will be managed under the responsibility of the Beneficiary Institution, and potential environmental and social impacts associated with these processes, along with mitigation measures, are presented in detail in the table below. Potential adverse environmental and social impacts arising during structural strengthening and energy efficiency works are intended to be eliminated or reduced to acceptable levels through the implementation of appropriate mitigation measures.

Table 8 - List of Environmental & Social Impacts and Mitigation Measures

IMPLEMENTATION/CONSTRUCTION PHASE	RISK & IMPACTS	MITIGATION MEASURES	RESPONSIBLE PARTIES
Renovation and retrofitting works for improving seismic resistance and energy efficiency in public buildings	**a)** OHS Possible adverse safety and health impacts on workers, local population, and staff due to the following: Potential injuries to workers arising from working at heights, working with hazardous materials, and electrical tools; Non-compliance with national and defined international occupational health and safety requirements at the workplace;	• Local construction and environmental inspection authorities and communities shall be informed about the activities to be carried out. • The public shall be informed through stakeholder engagement, and appropriate notifications in the media and/or public spaces. • All legally required permits for construction and/or renovation shall be obtained. • The Project Implementation Unit (PIU) and the Consultant shall conduct regular site supervision to ensure and monitor that all construction activities are carried out in compliance with national laws and regulations—including the regulation on fire safety of buildings—and the requirements of World Bank standards. • Detailed information regarding occupational health and safety is provided as guidance in the Occupational Health and Safety Plan prepared for the same campus.	PIU Consultant
		• In areas where the underground natural gas pipeline passes, the Natural Gas Provider Company shall be responsible for the necessary work before the commencement of Phase II (Construction Phase) of the projects. All operations related to the Natural Gas Pipeline shall be carried out by the Service Provider Local Distribution Company, with all inspections and tests completed and the environment fully prepared prior to Site Handover and shall be delivered as specified in the project documents. The Property Owner is required to apply in accordance with the relevant legislation for all operations related to the said natural gas pipeline. Therefore, neither the Consultant Firm nor the Contractor shall in any way intervene in the natural gas pipelines. • In the event of a major incident, such as a workplace accident, the Contractor shall immediately inform MoEUCC. MoEUCC shall report all significant incidents (such as accidents, leaks, fatalities) 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. • The PIU and the Consultant shall conduct regular site supervision to ensure and monitor that all construction activities are carried out in compliance with national laws and regulations and the requirements of World Bank standards. • Health and safety measures and environmental precautions related to the reconstruction of the public buildings shall be detailed in the project-specific Waste Management Plan and Occupational Health and Safety (OHS) Management Plan. • The Occupational Health and Safety Plan has been prepared by the Consultant for Elazığ Fırat	Consultant PIU Contractor

		University. Activities on site shall be carried out in accordance with the measures specified in this OHS Plan. • The Contractor shall prepare its own OHS Plan for the works to be carried out, taking into account the Occupational Health and Safety (OHS) Plan prepared by the Consultant. • Prior to the commencement of construction works, a Risk Assessment study shall be conducted for all tasks to be undertaken. Relevant procedures and plans—such as risk assessment, safety procedures, training, monitoring, incident investigation and reporting, and Emergency Plans—shall be included in the Health and Safety Plans (The Health and Safety Plans shall be prepared by the Supervision Consultants and further developed by Contractors by adding site-specific risk assessments, procedures, and instructions), as presented in Annex-8 of the ESMP. • Appropriate signage shall be placed at the construction sites, and workers shall be informed about the basic rules and regulations they must follow. • Occupational Health and Safety (OHS) training courses shall be provided to employees to identify potential risks related to the site and tasks to be performed, and weekly and monthly on-site safety meetings shall be held. • The Contractor shall formally acknowledge that all works will be carried out in a safe and disciplined manner designed to minimize the impact on residents and the environment. • The Contractor shall assign a staff/responsible person/expert with relevant certification and experience responsible for occupational health and safety. • The Contractor shall provide a safe working environment for workers and shall always supply personal protective equipment (PPE)—such as hard hats, and masks, safety goggles, safety harnesses, and safety boots when necessary—prior to the commencement of construction activities, in accordance with international best practices and Turkish legislation. • Appropriate rest areas for employees during work breaks shall be provided by the Contractor in consultation with and with permission from the building management (based on the number of workers and rest hours). • Dining areas for workers shall be established in areas designated by the building technical units under the written permission and approval of the building administration. • Changing areas (with lockable facilities) for workers shall be provided within the buildings with the written permission and approval of the campus administration. These areas shall be designated by the building technical staff, and the use of areas outside of those designated is strictly prohibited. The Contractor shall inform workers not to keep valuables in these areas and that the building management bears no responsibility for theft or other negative incidents that may occur in these areas. This matter shall also be posted with warning signs.	

		• Sanitary needs of workers shall be met by using building infrastructure under the written permission and approval of the campus administration. In case existing infrastructure cannot be used, WC containers shall be provided by the Contractor for worker use, and these containers shall include all necessary materials to ensure hygiene. However: • Workers shall only use the toilets that are permitted/allocated to them within the building. The Contractor shall inform its workers of these permitted/allocated toilets based on the number of employees. Monitoring and enforcement of this restriction shall be the responsibility of the Contractor. • The Contractor shall instruct its workers to use the designated toilets in accordance with hygiene rules, and if improper use is identified, cleaning responsibility shall rest with the Contractor. • All hygiene materials required by workers shall be provided by the Contractor. • The Contractor shall provide work clothing bearing the project name so that workers can be easily identified. • Workers are strictly prohibited from engaging in arguments with building technical personnel or building users for any reason. In the event of individual or activity-related problems, workers shall immediately inform their supervisor (The responsible supervisor and contact information shall be communicated to all workers by the Contractor). The Contractor shall record such incidents and report them to the Consultant. Any decision/action related to this process shall be carried out with the knowledge and approval of the building management. • In the case of night work, approval shall be obtained from the building management. All activities shall be carried out in accordance with both the Occupational Health and Safety Law (Official Gazette dated 30 June 2012, No. 28339) and its related regulations, as well as the World Bank Group (WBG) Environmental, Health, and Safety (EHS) Guidelines. • In the event of any epidemic or pandemic/infectious disease, all guidance, manuals, and recommendations issued by the Ministry of Health, Ministry of Labor and Social Security, and the World Health Organization shall be followed, and all relevant measures for occupational health and safety shall be taken for both workers and workplaces. • Unauthorized third parties shall not be allowed to enter the construction site. • The names of all personnel who will work on the construction site, along with their necessary training certificates, shall be submitted to the Consultant as a list. Only workers who have received appropriate training and are equipped with personal protective equipment shall be allowed to enter the construction site, wearing ID badges. • People under the age of 18 shall not be permitted to enter the construction site.	

		• The Contractor shall designate smoking areas within the construction site. Smoking outside these designated areas is strictly prohibited. • Food and beverage, break/rest, toilet, and hand-washing needs shall be provided in areas indicated by the technical units inside the building where the work is being carried out. This matter shall be handled with the knowledge of campus administration. Workers involved in the project shall not go beyond the allocated areas. • All hygiene materials required for the use of workers shall be provided by the Contractor. The local sewer infrastructure shall be used for wastewater disposal. • Packaged drinking water (e.g., plastic or glass bottles) shall be provided to the workers. • Clean utility water shall be supplied through the existing plumbing systems of the building. Consumption of this water shall be prohibited. • The Contractor shall provide a healthy and safe working environment for workers, supply personal protective equipment (PPE) in accordance with Turkish legislation and international best practices—including the pandemic-related health and safety measures provided by the Ministry of Health and the Ministry of Labor and Social Security—and shall ensure their proper use and monitor compliance. (This includes the constant use of hard hats, and the use of respiratory protection, protective goggles, full-body safety harnesses, and foot protection where necessary.) • Personal protective equipment (PPE) and work uniforms shall be stored separately from workers' personal clothing, and enclosed changing areas shall be established inside the building for this purpose. • In the event of work accidents resulting in lost time, a root cause analysis shall be conducted and reported. • Workers who will work at height (e.g., façade insulation, roof insulation) shall receive both theoretical and practical training on working at height. The occupational physician shall indicate in the medical report that the worker is fit to work at height. A work-at-height plan shall be prepared before starting the activity, and a work permit shall be obtained. Work at height shall be carried out under the supervision of a qualified person and an occupational safety specialist. Fall protection systems and work-at-height equipment shall be selected in accordance with relevant legislation, and their inspection, maintenance, and repairs shall be performed by specially trained personnel. • All construction machinery and equipment to be used shall undergo the required periodic inspections and/or maintenance; compliance with standards and CE certificates shall be checked; relevant records shall be kept; otherwise, such equipment shall not be allowed into the work area. Workers assigned to use such equipment shall be provided with job-specific training. • Maintenance forms for all work equipment to be used on site shall be provided, regular	

		maintenance and repairs shall be carried out, and responsible personnel for maintenance and repair works shall be designated. • Risk analyses shall be updated when new equipment is introduced or innovations are made in the execution of work, and all changes shall be accompanied by updated information/training. • All lifting equipment, pressure vessels, and boilers to enter the site shall be approved for entry after periodic inspections have been verified (by the Consultant). • All machinery, equipment (including scaffolding), and hand tools to be brought into the site shall be checked for compliance with TSE standards and CE certification, and entry approval shall be granted by the Consultant. • Planning of procurement, delivery processes, and storage areas for materials shall be ensured. • The Contractor shall assign at least one (1) employee with First Aid Certification for every ten (10) workers working in the same building, and at least one (1) certified first aider even if the number of workers is below ten (10). Each team working in separate buildings should be evaluated individually. • A procedure for working with hazardous chemicals shall be prepared, and designated storage areas for materials shall be established. Chemical substances shall be accepted on site only after checking their safety data sheets (SDS). • Workers without vocational qualification certificates shall not be employed. • All workers shall begin work only after completing basic OHS training and induction training. Training shall be updated where required by legislation. • Indoor and outdoor renovation areas shall be marked off with warning/tape barriers. Sufficient warning signs should be installed to restrict access to these areas. • Visitors should not be allowed to approach work areas. However, when necessary for monitoring purposes, building technical staff may enter such areas under supervision of authorized personnel, provided that proper safety measures are taken and the required PPE is used within the scope of their expertise. Training materials should be prepared for such visitors, and they should be trained before entering the site. • A construction method statement and risk assessment shall be prepared for each activity to be carried out on site. • A work permit system should be established for high-risk work such as night work, working at height, excavation, welding, etc. • A lockout-tagout (LOTO) system shall be established for maintenance and repair works, and operations on live energy lines such as high-voltage tasks. Special training shall be provided to	

		workers regarding this system. • A disciplinary enforcement system regarding OHS nonconformities on site shall be established, and all workers shall be trained in this matter. • Construction activities shall primarily be carried out during daytime. However, if night work is performed, all work areas, passageways, and hazardous zones shall be properly illuminated. • Procedures covering emergency situations that may occur during construction activities (e.g., fire, earthquake, chemical spill, etc.) and addressing public and environmental health—shall be prepared and shared with all workers. • In the event of short- or long-term electricity, water, or natural gas interruptions due to construction activities, necessary safety measures shall be taken, and building users shall be informed a reasonable time in advance. • All documents and records required under OHS legislation—such as health screenings of workers, onboarding documents (personnel files), training materials, PPE delivery receipts, and approved site logs—shall be kept on site. These documents shall be ready for presentation during Consultant and Ministry inspections. • An organizational chart shall be prepared under the OHS heading, specifying duties, authorities, responsibilities, and contact information. • If modifications are made to public building entrances during construction works, accessible structures for disabled users shall be provided. • The OHS Plan to be prepared shall also address community health and safety and shall designate a person and position responsible for communication with building users and the local population. • Records of all activities and incidents (meetings, inspections, supervision, training, accidents, fires, etc.) occurring throughout the construction phases shall be maintained. • In accordance with the SREEPB Project's Labor Management Procedures, and covering both the Contractor and all subcontractors: • The Contractor and all subcontractors shall prepare a written and signed social policy/commitment letter stating that they will not engage in forced or compulsory labor, will not employ child labor or uninsured workers, and will not allow any discrimination (based on age, gender, religion, language, race, etc.), coercion, mistreatment, bullying, insults, or humiliation among their workers. The document should also emphasize that all contractor personnel must adhere to these principles in their relationships and communication with one another. • The Contractor shall take preventive measures to avoid the spread of communicable diseases (including sexually transmitted infections such as HIV) and non-communicable diseases arising	

		from the execution of construction works and shall act with awareness of the fact that vulnerable and marginalized community groups may face different levels of risk. The Contractor shall implement measures to prevent and mitigate the spread of communicable diseases that may result from temporary or permanent labor mobility related to the contract.	
	b) OHS Possible adverse health impacts on workers, facility users, children, and the general public as a result of asbestos fiber and dust emissions during debris transport and final disposal	• The project site shall be illuminated throughout the night. • No waste shall be discarded in the surrounding area, and this area shall be kept clean. Waste must be collected from and removed from the construction site. • Any broken glass that occurs during the process shall be cleaned up immediately. • Work areas shall be separated from the demolition and occupied sections of the building using physical barriers. • All procedures related to asbestos shall be implemented in accordance with Annex-8 of the Environmental and Social Management Framework document. Activities shall be conducted in compliance with Annex 8, the Regulation on Health and Safety Measures in Working with Asbestos, and relevant legislative requirements. • The building's cleaning schedule shall be expanded to address the excess dust and dirt generated by the demolition work. • Hazardous materials shall be handled—during storage, transport, and distribution—in accordance with safety guidelines to minimize the risk of misuse, leakage, and accidental human exposure. • Old windows and doors should be temporarily stored in a secure area designed to prevent unauthorized access. • Regular maintenance shall be carried out on vehicles to minimize the risk of serious accidents due to equipment failure or early malfunction. • Both training sessions and incidents (such as fatalities, lost-time injuries, leaks, fires, and other significant events) shall be recorded. • In the event of a major incident, the Contractor shall immediately notify the MoEUCC. The MoEUCC shall report any significant incident (such as accidents, leaks, fatalities) to the World Bank within 2 days (48 hours) and submit an incident investigation report along with a corrective action plan to the World Bank within 30 working days.	Contractor

	c) Safety	• From the moment construction/implementation activities commence, the Contractor shall be responsible for the safety of life and property of all staff and other individuals within the construction site. • In the event of any damage occurring during the construction work, the Contractor shall fully compensate the damages incurred by the Beneficiary Institution, the Employer, and/or third parties. • During the works, the safety regulations of the Republic of Türkiye Ministry of Labor and Social Security and the rules of the Ministry of Health shall be taken into consideration. These rules should serve as general references during the execution of the works. • The Contractor shall assign an authorized staff member specifically responsible for safety and protection against accidents on site. This person shall be responsible not only for all workers and labor force of the Contractor but also for the Project Manager, the Employer's personnel on site, equipment, offices, and other facilities. This individual shall possess the necessary qualifications for the task, have the authority to issue instructions, and be capable of taking all necessary measures to prevent accidents. The Contractor shall establish a dedicated team specifically for this purpose. • The Contractor shall take all necessary safety precautions to protect the materials, equipment, and constructions that will remain in place and be used in the areas where production is to be carried out. • Enough guards forming a security team shall operate in coordination with municipal law enforcement, strictly complying with all rules and instructions received from them. The Contractor shall provide at least one (1) night guard for the work site. • The scrap of replaced machinery, equipment, and systems shall be delivered to the building management without damage. • The relevant machinery, equipment, and system components shall be transported by the Contractor to the location specified by the building management (inside the building and/or within the campus). Transport and delivery procedures shall be documented with a delivery protocol. From the date on which the protocol is signed by the parties, all responsibility for the scrap materials shall rest with the building management.	Contractor

Renovation and retrofitting works for improving seismic resistance and energy efficiency in public buildings	***d) Waste Management*** Possible adverse environmental and health impacts may arise due to various waste streams and improper waste management (improper waste management may cause direct and indirect pollution in water and soil)	**General Information** • The PIU and the Consultant shall monitor the implementation of environmental and social impact mitigation measures, as specified in the Environmental and Social Management Plan, through site inspections. • The PIU and the Consultant shall conduct regular site inspections to ensure and monitor that all construction activities are carried out in compliance with national laws and regulations and the World Bank ESF requirements.	PUB Consultant
		• The Waste Management Plan shall be prepared by the Contractor as specified in Annex 9 of the Environmental and Social Management Framework[7]. • Waste collection and disposal methods and locations for all types of waste expected to be generated from renovation, demolition, and construction activities shall be defined in site-specific Waste Management Plans. • Daily visual site inspections shall be carried out by the Consultant to monitor the implementation of mitigation measures. • During construction activities, all types of waste shall be collected separately at the source and transported to temporary waste storage areas selected in accordance with project and legal requirements and identified with the knowledge of the Beneficiary within the site. (Temporary storage duration is limited to 6 months.) • Temporary storage areas shall be designated by the Contractor upon receiving permission from the authorities of the University, and these areas shall be reported to the Consultant. • If a protocol is signed between the Contractor and the Beneficiary Institutions, the existing waste management system may be used. However, under the protocol, the Contractor shall be responsible for covering the costs arising from its own waste. • The Contractor shall reuse and recycle suitable and feasible materials where possible. • Documentation related to waste disposal and recycling shall be regularly recorded. A Waste Record Information Form shall be prepared for maintaining these records.	Contractor

[7] https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894_sef_final-may_20210521121600.pdf

		• Hazardous waste shall be sent to licensed disposal facilities using the waste management application via the Integrated Environmental Information System (N-EIS) of the Ministry of Environment, Urbanization and Climate Change. For this purpose, the Contractor shall register in N-EIS. In case tire replacement is required during construction activities, used tires shall be disposed of through businesses engaged in tire distribution and sales, and by means of licensed transportation vehicles.	
		Construction and Excavation Waste:: • In the event that inventoried materials belonging to the building are generated as a result of dismantling activities, a document confirming delivery of such materials to the building management shall be obtained. • The recovery of construction/demolition waste, especially its reuse as infrastructure material, shall be prioritized. Excavation waste shall be sent to the waste storage facility of the relevant municipality. An official letter from the Elazığ Municipality confirming that the waste will be accepted shall be obtained and submitted to the Employer. • Until construction and excavation waste is transported to the waste storage facility, it shall be stored on site under cover, and measures shall be taken to prevent any negative impacts. **Waste Batteries and Accumulators:** • Waste batteries and accumulators shall be delivered to licensed facilities via authorized transportation companies. **Hazardous Waste:** • In the event of temporary storage of hazardous waste on the project sites, the waste shall be stored in durable, leak-proof, secure containers that comply with internationally recognized standards, within the project area. The containers shall be labeled as hazardous waste and shall include the waste code, quantity, content, characteristics, storage conditions, and storage date. Hazardous substances may be temporarily stored for a maximum of 6 months. (Temporary storage areas shall be designated by the Contractor in compliance with legislation and with permission from the relevant beneficiary institutions for the project. These areas shall be reported to the Consultant.) • Regardless of the amount of waste, Liability Insurance shall be obtained for the operation of temporary storage areas for both hazardous and non-hazardous waste. • Containers storing harmful substances and waste oils shall be placed on impermeable concrete areas to prevent leakage or spills into the soil. • Paints with toxic content, solvents, or lead-based chemicals shall not be used. • Hazardous waste management shall be carried out in accordance with the Waste Management	Contractor

		Regulation. All details shall be included in the Waste Management Plan to be prepared by the Contractor. • Hazardous chemicals and waste that may be generated at the construction site shall be sent to licensed disposal facilities using the waste management application of the Ministry of Environment, Urbanization and Climate Change via the Integrated Environmental Information System (N-EIS). • Absorbent pad kits/sawdust and fire extinguishers shall be kept available in the work areas. A person responsible for the temporary waste storage area shall be assigned, and their name and contact information shall be posted in a visible location at the temporary waste storage area. All personnel on duty shall receive training in protection and emergency response related to hazardous chemical spills and leaks. • In the event of medium- and large-scale environmental accidents, an accident investigation should be conducted and reported. The Waste Management Regulation shall be followed in this regard. • Used fluorescent lamps removed during renovation/construction works shall be disposed of at licensed facilities. Required documents related to the transportation and disposal of the materials shall be kept at the construction site and submitted to the MoEUCC and the World Bank upon request. **Solar Panels:** • Unused and/or end-of-life solar panels shall be temporarily stored for a maximum of 6 months in an area identified together with the beneficiary institutions, in a manner that does not pose occupational health and safety or environmental risks. • After temporary storage, PV panels transported to licensed facilities via licensed vehicles shall first be recovered; those that cannot be recovered shall be disposed of in accordance with the relevant legislation. **Domestic Waste:** • Domestic waste generated shall be segregated at the source (plastic, glass, paper, etc.), and recyclable materials shall be recycled. Workers shall be trained to properly separate waste. • Non-recyclable waste shall be collected in closed sanitary waste bins and sent to regular landfill sites via Elazığ Municipality's solid waste collection system. **Asbestos:** • If asbestos is present at the project site, it shall be clearly marked as a hazardous material. • If asbestos is present, it shall be securely contained to minimize exposure and ensure it is sealed properly. • In cases where asbestos removal is required, a wetting agent shall be used before removal to	

		minimize asbestos dust. • All procedures related to asbestos are detailed in Annex 8 of the Environmental and Social Management Framework document https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894_sef_final-may_20210521121600.pdf). The Contractor shall act in accordance with the specified content. • If asbestos material is to be temporarily stored, the waste shall be securely kept in sealed containers and appropriately labeled. Security measures shall be taken to prevent unauthorized removal from the site. Removed asbestos shall not be reused and shall be disposed of in accordance with national regulations and sent to licensed facilities. Documents related to the transport and disposal of the material shall be kept at the construction site and submitted to the MoEUCC and the World Bank upon request.	
	e) Pollution Prevention Demolition and construction activities may cause pollution at construction sites.	• Site-Specific Pollution Prevention Plans to be prepared by the Contractor shall be reviewed by the Consultant and approved by the PIU. Regular sites inspections shall be conducted by the Consultant, and by the PIU when deemed necessary, to ensure and monitor that all construction activities are carried out in compliance with national laws and regulations and the World Bank ESF requirements. • Ambient air pollution caused by dust generation is addressed under section "g. Air Quality/Emission" of this Table. • Hazardous substances shall be secured in designated storage areas to prevent spills and toppling. Updated material safety data sheets (MSDS) for chemicals shall be kept in the storage areas. • Partially used chemical containers shall have lids and shall be tightly sealed when not in use. • Residual (leftover) concrete inside concrete mixers shall not be discharged onto the construction site, surrounding area, or access roads to the sites. Concrete mixer drivers shall be trained accordingly. • In the event of a hazardous substance or hazardous waste spill, containment methods shall be applied to limit the exposure area. • Spill kits shall be placed at appropriate locations on construction sites. • In case of any spill, workers responsible for responding to such incidents shall be designated and trained in emergency spill response. • Training records shall be kept at the construction sites.	PUB Consultant Contractor Contractor

	f) Noise The presence of workers on site, renovation/construction works, and the movement of transportation vehicles will increase noise and vibration levels.	• Regular site inspections shall be conducted by the Consultant, and by the PIU when deemed necessary, to ensure and monitor that all construction activities are carried out in compliance with national laws and regulations and the World Bank ESF requirements. • Noise during demolition and construction shall be limited to the restricted time periods agreed upon in the permit. • During construction activities, generator sets, air compressors, and other operating mechanical equipment shall have their engine covers closed and be placed as far surrounding buildings not included in the project. The use of rubber/plastic pads is mandatory for all such equipment to prevent excessive noise due to vibration. This requirement shall be taken into consideration when selecting equipment. • Impact noise resulting from site operations shall not exceed 100 dBC in terms of LC Max noise indicator, as specified in the Environmental Noise Control Regulation. From an occupational health and safety perspective, the World Health Organization (WHO) recommends that noise exposure levels should not exceed 70 dB over a 24-hour period and 85 dB for 1 hour to prevent hearing impairment. Additionally, the World Bank Environmental, Health and Safety Guidelines (Table 1.7.1) recommend that noise levels should not exceed 55 dB during 07:00–22:00 and 45 dB during 22:00–07:00 for residential/educational and institutional areas (link). This requirement shall be taken into account during site inspections. • During the demolition process following the start of construction, noise levels shall be measured for each building once, indoors and outdoors, by accredited laboratories. If the permitted levels defined by legislation are exceeded, necessary measures shall be identified. If the levels exceed the limits defined in legislation and the World Bank Guidelines, measurements shall be repeated weekly at regular intervals. • Based on measurement results, if necessary, the Contractor shall take additional measures such as installing noise barriers and reducing the simultaneous operation of machinery to prevent nearby settlements from being affected by noise. • Site evaluations shall be conducted in accordance with the Environmental Noise Guidelines for the European Region of the World Health Organization. • If noise levels increase during the construction phase, simultaneous operation of heavy machinery shall be prevented. • Work schedules for high-noise activities shall be planned in coordination with the occupants of nearby buildings. • To assess the impact of construction-related noise and to take necessary mitigation measures, communication shall be established with residents of the nearest settlements.	Contractor

		• Measures such as using newer model vehicles shall be taken to minimize noise levels as much as possible. • The unnecessary use of horns and sirens by vehicles transporting machinery, equipment, materials, and personnel under the project shall be prohibited. To receive and address grievances related to such matters, contact numbers shall be affixed to the vehicles.	
	g) ***Air Quality / Emission***	• Debris shall be kept in a controlled area, and water shall be sprayed to reduce dust from the debris. (Water shall be supplied from the campus infrastructure. The cost of the water used shall be covered by the Contractor. In the event of a prolonged water outage or if permission from the Employer cannot be obtained, water shall be supplied via water tanker.) • Following the start of construction, the Contractor shall perform for each building, one-time dust measurements in both indoor and outdoor areas through accredited laboratories during the demolition process. If the measurement results exceed the permissible levels defined in the legislation, additional measures should be taken to eliminate the issue, and the measurements shall be repeated at regular intervals. Principles to prevent air quality problems caused by demolition activities shall be defined in the Construction Methods to be prepared by the Contractors and approved by the PIU. • Rehabilitation and retrofitting works shall primarily take place inside the building. Dust generated during pneumatic chiseling and scraping operations shall be suppressed continuously through water spraying and dust suctioning machines. • Dust generated during pneumatic excavation shall be suppressed continuously through water spraying and/or, when necessary, by installing dust screen barriers on the construction site. • In the event of the generation of demolition waste, a debris chute shall be used starting from the first floor. In cases where a debris chute cannot be installed, alternative solutions should be developed, and debris shall not be thrown from a height under any circumstances. • To minimize dust, the surrounding environment (sidewalks, roads) shall be cleared of debris. • Construction materials/waste shall not be burned in open areas on site. • Construction vehicles shall not be left idling for extended periods at the construction sites. • All vehicles to be used shall have valid exhaust emission permits, and all vehicles shall be regularly maintained or monitored to ensure that maintenance is performed.	Consultant Contractor

	h) W a t e r Quality Uncontrolled disposal of wastewater/waste generated at the construction site	• The storage or disposal of waste generated at the construction site shall be minimized. • There are no water bodies in the vicinity of the Elazığ Fırat University Campus. Provided that waste is collected in accordance with the Waste Management Plan, no adverse impact on surface water resources is anticipated. • Construction vehicles and machinery shall only be washed in areas where surface runoff will not pollute natural surface water bodies. • In operations involving chemicals, measures such as trays, thick plastic sheeting, etc., shall be taken to prevent potential spills.	Consultant Contractor
	i) Soil Quality Contamination of soil by hazardous substances and waste	• Waste management, as mentioned in previous sections, shall be carried out in a disciplined manner. • All hazardous chemicals (including contaminated waste) shall be stored in temporary storage areas that meet containment/sealing requirements. • Before the use of any chemicals, Material Safety Data Sheets (MSDS) shall be reviewed by the OHS Specialist and Workplace Physicians, and users shall be informed. Spill pads shall be kept on site to prevent point-source pollution (e.g., spilled paint, oil leaks from vehicles), and all workers shall be subjected to spill & leak response training. These trainings shall be reinforced through drills. At least one spill response kit shall be kept for each building and for each mobile construction machine.	Consultant Contractor
	j) *Required Resources*	• Contractors shall obtain the necessary permissions from the beneficiary institutions' administration to use water from the municipal network for construction activities. The cost of the water used shall be covered by the Contractor. In case of any issues in obtaining permission, water shall be supplied to construction sites via tankers. • Concrete shall be procured from locally licensed ready-mix concrete plants. • Permission shall be obtained from the Beneficiaries for the use of electricity during construction activities. If such permission cannot be obtained, electricity shall be supplied via generators provided by the Contractor. Records of electricity (for generators), fuel, and water consumption used for construction activities shall be kept at the construction sites, and the costs shall be borne by the Contractor. • Regular site inspections shall be conducted by the Consultant, and by the PIU when necessary, to ensure and monitor that all construction activities are carried out in compliance with national laws and regulations and the requirements of World Bank standards.	Contractor PIU Consultant

	k) Community Health and Safety / Traffic and Pedestrian Safety	• To ensure and monitor that all construction activities are carried out in compliance with national laws and regulations, World Bank standards, and the Occupational Health and Safety Plan prepared for the activity, regular site inspections shall be conducted by the PIU every two months and by the Consultant on a daily basis. • The PIU shall review and approve the site-specific Community Safety and Traffic Management Plan prepared in accordance with the Occupational Health and Safety Plan. • The Contractor and the Consultant shall jointly develop the Traffic Action Plan by also taking into consideration the needs of persons with disabilities. • In line with national regulations and World Bank ESF requirements, the Contractor shall ensure that the construction site is properly secured and that construction-related traffic is managed accordingly. • Signboards, warning signs, barriers, and traffic directions shall be installed; the construction site shall be clearly visible, and the public shall be warned against all possible hazards. • A traffic management system and personnel training shall be provided, especially for access to the site and areas of heavy traffic near the site. Safe crossings and walkways for pedestrians shall be ensured at points intersecting with construction traffic. • Working hours shall be adjusted in accordance with local traffic patterns; for example, major transportation activities shall be avoided during peak hours or during livestock transportation periods. • If necessary, active traffic management at the site shall be carried out by trained and visible personnel to ensure safe and comfortable passage for the public. • Construction areas shall be surrounded by health and safety signs to prevent potential accidents. • In the event of short- or long-term interruptions in electricity, water, or natural gas due to construction activities, the relevant building technical units shall be notified in advance and approval shall be requested. • Construction areas shall be physically separated with barriers to prevent unauthorized access and to ensure site security. • All vehicles operating during the construction period shall comply with the designated speed limits. • The surroundings and nearby areas of the project site should be organized with traffic signs and warning boards. The Traffic Action Plan is included in the Occupational Health and Safety Plan prepared by the Consultant. In addition, before starting the works, the Contractor shall include more detailed safety precautions in the Community Safety and Traffic Management Plan to be prepared. • Visibility of the project site shall be ensured. • Pedestrian paths and vehicle routes within the site shall be separated from each other. These routes shall be reflected in the traffic plan. • Local residents, building visitors, and users shall be informed about potential hazards and risks	Consultant Contractor

		through warning signs and, if necessary, information meetings. • Users and other stakeholders shall be informed about the works to be carried out, including measures taken in the event of a pandemic, through appropriate media and/or printed materials and signage placed in publicly accessible areas (including construction sites). • Pedestrian paths and vehicle routes within the site shall be separated from each other. These routes shall be reflected in the traffic plan. • Activities that may affect regional traffic shall be scheduled with consideration of peak traffic hours as much as possible. All drivers involved in the project shall be informed about road safety, speed limits, traffic rules to be followed during the project, and special conditions to be observed. • The weights of vehicles to be used within the scope of the project shall not exceed the limits defined by the relevant legislation. • If hazardous chemicals or waste are stored on site, their transportation shall be carried out by licensed carriers in a manner that does not pose a threat to public health. • Special loads shall use routes prepared in coordination with the competent authorities. These routes shall be scheduled to avoid traffic congestion and shall be announced in advance to prevent potential disturbances. • All traffic-related arrangements shall be discussed and planned with the relevant authorities.	
Operational Phase Impacts and Risks	***a) Waste Management*** Improper waste management involving various waste streams may cause potential adverse environmental and health impacts (improper waste management may result in direct and indirect pollution of soil and the environment and may also affect air quality)	• Waste reduction at the source shall be ensured, and in this context, trainings shall be provided to employees. • Waste types shall be collected and stored separately, and their recovery/disposal shall be carried out through licensed companies in accordance with national legislative requirements. • Records shall be kept regarding the waste collected, stored, or transported.	Fırat University Authorities
	b) OHS Risks Maintenance and repair activities for the proper functioning of the building may pose OHS risks for workers.	• Relevant OHS risks shall be mitigated through the provisions specified in national legislation. • Regular preventive measures and maintenance activities for the proper functioning of the building (regular inspection and maintenance of the roof, windows, doors, and any potential leakages) • Keeping records of the Main Design Project and related project documents to facilitate easy maintenance and replacement of any part of the building	Fırat University Authorities

Throughout the project duration	***Stakeholder Feedback (Suggestions, Grievances, Opinions)***	• Grievances/opinions/suggestions arising from construction activities shall be collected, recorded, and submitted to the Employer by the responsible staff member of the construction Contractor at the site level, using the forms provided in Annex III and Annex IV. Grievances shall be closed using the Grievance Closure Form provided in Annex V. • The Consultant's Social Specialist shall provide training to the Contractor's site representative regarding the functioning of Grievance Mechanism. • Corrective actions shall be taken within 15 calendar days for grievances/opinions/suggestions collected under the project. If the resolution process exceeds 15 calendar days (maximum duration is 30 calendar days), this matter must be agreed upon between the complainant and the Contractor/PIU. At the end of the process, the applicant shall be informed that the request has been closed. • In cases of grievances related to gender-based violence, sexual exploitation, and harassment, confidentiality shall be ensured and action taken in accordance with the principle of non-retaliation. • In the event of encountering a Sexual Exploitation and Abuse (SEA) crime, legal procedures (such as reporting the incident to law enforcement authorities or referring the survivor to the relevant public institution) shall be initiated immediately, with the survivor's consent and knowledge. In such cases, the PIU Social Specialist shall be informed on the same day. • The Contractor shall carry out all activities related to the Grievance Mechanism (GM) in accordance with the SREEPB Project GM Procedure. • All personnel working under the SREEPB Project (PIU, Consultant Firm, Contractors) may report their grievances/opinions/suggestions to the Employer and/or the World Bank by following the procedure outlined in the Employee GM section of the Labor Management Procedures prepared for the SREEPB Project. • To ensure the collection of suggestions and grievances, the Contractor shall display the contact information provided in this report via information boards assigned both outside and inside the building (at least one per floor). • The principles regarding the receipt of feedback are explained under the section titled "4. Stakeholder Engagement and Grievance Mechanisms" of this document.	PIU Consultant Contractor

6. ENVIRONMENTAL AND SOCIAL MONITORING PLAN

Table 9 - Environmental and Social Monitoring Plan

What *parameter be monitored?*	**Where** *parameter be monitored?*	**How** *parameter be monitored?*	**When** *parameter be monitored (frequency)?*	**Why** *parameter be monitored?*	**Responsibility**
Renovation and Retrofitting Works Site Preparation Activities					
Community health and safety management and implemented protection measures	Around the project site	Visual inspections Site Supervision Active implementation and presence of the Community Safety and Traffic Management Plan on site	At the beginning of the renovation/retrofitting works (first day) Every working day throughout the project activities	To ensure minimization of health and safety risks and mechanical injuries to local residents	• Consultant • Contractor
OHS protection measures implemented for workers at construction sites	Project site and buildings near the project site	Visual inspections Site Supervision Implementation and presence of the OHS Plan on site	Every working day throughout the project activities	Compliance with the Occupational Health and Safety Law, relevant regulations, communiqués, circulars, and other provisions	• Consultant • Contractor
Avoiding and minimizing safety and health risks for Project-Affected People	In the building and at the project site	Visual inspections	At the beginning of and continuously every working day during the renovation/retrofitting works	To prevent harm to the health of project-affected people due to inhalation of asbestos fibers and/or construction dust	• Consultant • Contractor

What *parameter be monitored?*	**Where** *parameter be monitored?*	**How** *parameter be monitored?*	**When** *parameter be monitored (frequency)?*	**Why** *parameter be monitored?*	**Responsibility**
Renovation and Retrofitting Construction Works					
OHS protection measures implemented for workers on site *(working at height, working with hazardous materials, working with rotating equipment, working with electrical devices, etc.)*	Project site Buildings near the project site	Inspection of documents related to relevant OHS certificates and trained workers Visual inspections for use of protective equipment Implementation of the OHS Plan and site-specific Health and Safety instructions Site supervision Inspection of records	Before starting demolition works Every working day throughout the project activities	To minimize occupational health and safety risks for workers Compliance with the Occupational Health and Safety Law, relevant regulations, communiqués, circulars, and other provisions	• Consultant • Contractor
Manufacturing, Operation, and Delivery (pipeline manufacturing and construction)	Project Site	Visual Inspections, Site Control Records, Required Tests, Verification of Personnel Competency by the relevant authority	During the relevant manufacturing process in the project and upon completion of the manufacturing	To confirm that the pipeline construction is completed before handover, and to prevent a potential disaster after production and delivery to the end user	• Elazığ Fırat University AuthoritiesService Provider Institution OHS Department • Consultant • Contractor
Working conditions and terms of employment	Project site	Final OHS Plan inspection Sites supervision Grievance mechanism (feedback)	Every working day throughout the project activities	Compliance with the Occupational Health and Safety Law, relevant regulations, communiqués, circulars, and other provisions	• Consultant • Contractor
Health and Safety records	Project site	Inspection of Health and Safety site documents	Weekly	To ensure that the required Occupational Health and Safety records are kept at construction sites	• Consultant • Contractor

What *parameter be monitored?*	**Where** *parameter be monitored?*	**How** *parameter be monitored?*	**When** *parameter be monitored (frequency)?*	**Why** *parameter be monitored?*	**Responsibility**
Air Quality	Across project sites, access roads, Project site, Buildings near the project site	Site inspections Measurement to be conducted during the demolition phase Measurements to be conducted in case of grievances	Every working day throughout the project activities Once by the accredited laboratory In case of grievances	To minimize dust generation in order to prevent negative impact on local residents and the environment Air Quality Assessment and Management Regulation Regulation on the Control of Industrial Air Pollution	• Consultant • Contractor
Noise	Project site Buildings near the project site	Visual inspection/sites supervision for the implementation of designated noise reduction measures, including declared methods used Monitoring with noise measurement device at the nearest buildings. Measurements to be conducted at the grievance point in case of grievances	Every working day during construction activities Once by an accredited laboratory In case of grievances	To minimize noise in order to prevent negative impact on local residents and the environment Compliance with the Environmental Noise Control Regulation	• Consultant • Contractor
Waste Management	Project site	Waste records Site supervision Visual inspection	Every working day during construction activities	To prevent pollution in order to protect construction workers, beneficiary staff, local residents, and the environment	• Consultant • Contractor
Domestic Waste	Project site	Waste records Site supervision	Daily / Throughout the project duration	Regulation on the Control of Packaging Waste Waste Management Regulation	• Contractor

What *parameter be monitored?*	**Where** *parameter be monitored?*	**How** *parameter be monitored?*	**When** *parameter be monitored (frequency)?*	**Why** *parameter be monitored?*	**Responsibility**
Hazardous Waste	Project site	Waste records Site supervision Visual inspection	Daily / Throughout the project duration	To separate hazardous waste (adhesives, paint, insulation materials, packaging waste) from non-hazardous waste and biodegradable waste	• Consultant • Contractor
Identification, proper packaging, and labeling of asbestos-containing waste as hazardous waste	At project construction sites Before removal/dismantling works begin	Identification of asbestos-containing waste according to the waste list Sites supervision Review of document records	Daily / Throughout the project duration In case of detection	Regulation on Health and Safety Measures in Working with Asbestos	• Consultant
Proper temporary storage, packaging, and labeling of removed waste	Project site	Waste records Site supervision Visual inspections	Daily / Throughout the project duration	To minimize injuries, prevent environmental pollution, and ensure proper inventory keeping Waste Management Regulation	• Consultant • Contractor
Excavation and Construction Waste	Project site	Visual inspection Transport records Site supervision	After removal of all parts of the buildings containing hazardous materials Daily / Throughout the project duration	To ensure the disposal of excavation residue and construction debris in accordance with applicable national regulations and the Project's Demolition/Dismantling methodology Regulation on the Control of Excavation Soil, Construction and Demolition Waste	• Consultant • Contractor

What *parameter be monitored?*	**Where** *parameter be monitored?*	**How** *parameter be monitored?*	**When** *parameter be monitored (frequency)?*	**Why** *parameter be monitored?*	**Responsibility**
Soil Pollution	Project sites, external storage areas, and access roads	Controlling training records (spillage, leakage training) Controlling chemical absorbent kits (Site, mobile construction machinery) Site supervision	Daily / Throughout the project duration	Protection of soil and groundwater quality • Regulation on the Control of Soil Pollution and Sites Contaminated by Point Sources • Regulation on the Control of Water Pollution • Regulation on the Protection of Groundwater against Pollution and Deterioration	• Consultant • Contractor
Vehicle and Pedestrian Safety	Project sites and access roads	Visual inspection Use of appropriate signs and signals Site supervision Implementation of the Community Health and Traffic Management Plan	Daily	To protect construction workers, beneficiary staff, and local residents from injuries and fatalities related to traffic accidents	• PIU • Consultant • Contractor

Grievance Mechanism	Project site Buildings near the project site	Grievance and Suggestion Forms Grievance Closure Forms Total number of grievances (pending/resolved and gender-disaggregated) Number of grievances received Number of grievances resolved Number of unresolved grievances and the reason why it cannot be solved Grievance Log Presence of announcement posters related to the Grievance Mechanism (GM) Physical condition of suggestion and grievance boxes Condition of the lock mechanisms of suggestion and grievance boxes	Weekly (Throughout the project duration)	• Environmental and Social Management Plan (ESMP) • Grievance Mechanism (GM) • Stakeholder Engagement Framework (SEF) To enable stakeholders directly or indirectly affected by the project to express grievances/opinions/suggestions about project activities, to contribute to the project, and to benefit from it to the maximum extent	• Consultant • Contractor • PIU

What *parameter be monitored?*	**Where** *parameter be monitored?*	**How** *parameter be monitored?*	**When** *parameter be monitored (frequency)?*	**Why** *parameter be monitored?*	**Responsibility**
Stakeholder Engagement	Fırat University	Number of participants in Stakeholder Engagement Meeting (gender-disaggregated) Inspection of project-related informational materials (announcement posters, web publications, etc.)	Daily	Fulfillment of the requirements of the Stakeholder Engagement Framework (and Grievance Mechanism)	• PIU • Consultant • Contractor
Renovation/Retrofitting **Works Operation Process**					
Waste Flows	Retrofitted and energy-efficient buildings	Implementation of waste management requirements on site	Regularly (Throughout the project duration)	To ensure proper collection and disposal of waste in accordance with national legal requirements	• Fırat University
Health and Safety	Retrofitted and energy-efficient buildings	Regular inspection of the roof with installed solar energy system, windows, doors, leakages (if any), etc.	Regularly (Throughout the project duration)	To ensure the health and safety of building residents/users	• Fırat University

7. TASKS AND RESPONSIBILITIES

Table 10 - Task Allocation List

RESPONSIBLE PARTY	RESPONSIBILITY
MoEUCC/PUB	• Monitoring the implementation of the project and the use of funds • Employment of at least one full-time Environmental, Social, and OHS specialist • Carrying out and following up official correspondence with relevant authorities • Ensuring and supervising that the ESMPs prepared specifically for the project comply with both national regulations and WB policies • Approval of ESMPs following the relevant checks • Establishment of the Grievance Mechanism • Organizing and conducting project information meetings • Providing guidance to the consultant and contractors • Summarizing environmental and social aspects of project implementation in semi-annual progress reports and submitting them to the WB • Providing coordination and liaison for WB supervision missions in the context of evaluating environmental and social safeguard policies during project implementation • Auditing the contractor's implementation of the ESMP and documenting required performance, recommendations, and future activities as part of the general project supervision • Ensuring corrective implementation by the contractor in case of non-compliance with the ESMP and informing the WB accordingly • Supporting the consultant, if needed, in obtaining necessary permits during the project • Reporting all significant incidents (such as accidents, spills, or fatalities) to the World Bank within 48 hours and submitting an incident investigation report with a corrective action plan within 30 working days.
CONSULTANT	• Conducting a pre-site assessment before the project starts • Employment of at least one full-time Environmental, one Social, and one OHS specialist • Preparation of project-specific ESMP and Occupational Health and Safety Plan • Monitoring, evaluating, and reporting to the Administration the activities defined as contractor responsibilities in the ESMP and OHS Plan • Ensuring the operation of the Grievance Mechanism established by the Ministry • Providing feedback to MoEUCC by preparing monthly/semi-annual reports on the project and ESMP processes • Review and approval of Construction Methods prepared by the contractor • Submitting an application to the energy distribution company for photovoltaic (PV) panel installation • Submission of sub-management plans such as the Waste Management Plan and Pollution Prevention Plan, to be prepared by the Contractor, to PUB for review and approval, • In the context of the World Bank Environmental and Social Standards, the monitoring of the contractor's working conditions, identification of any non-compliances, and implementation of necessary corrective actions to address such non-compliances. • Review and approval of all sub-management plans related to Occupational Health and Safety by the ContractorProviding contractor trainings (Environmental Impacts, Waste Management, Efficient Use of Resources, OHS Plan Implementation and Monitoring Training, Environmental Emergency Response, Energy Efficiency, Stakeholder Engagement Information Activities, Code of Conduct, Grievance Mechanism, Gender-Based Violence/Sexual Exploitation/Sexual Abuse/Sexual Harassment, Lockout-Tagout Train-the-Trainer (LOTO), Work Permit System Training, Protection of Cultural Heritage)

CONTRACTOR	• Employment of at least one full-time Environmental, one Social, and one OHS specialist • Implementation on-site of the ESMP and OHS Plan, as well as laws, regulations, and directives prepared by the Consultant and included in the tender documents • Proper implementation of the relevant laws and regulations stated in the tender documents • Compliance with working condition requirements as outlined in the World Bank Environmental and Social Standards. • If needed, updating the ESMP, SEP, and OHS Plan in cooperation with the Consultant during their implementation on site • Preparation of an OHS Plan for the contractor's own activities, taking into account the Consultant's OHS Plan • Regular monitoring (daily, monthly, etc.) of the site activities defined in the project-specific ESMPs • Preparation of the Community Safety and Traffic Management Plan • Ensuring that the Grievance Mechanism established by the Ministry operates in accordance with the GRM Procedure • Reviewing the ESMP prepared by the Consultant and either committing to its implementation or preparing the Contractor's own ESMP, including relevant sub-management plans (e.g., Waste Management Plan, Pollution Prevention Plan, Community Safety and Traffic Management Plan, Occupational Health and Safety Plan, etc.) and job-specific construction/implementation methods • Preparation of the Chance Find Procedure, if deemed necessary • Preparation of ESMP progress reports for review by MoEUCC • Before the commencement of any construction work, establishment and transparent operation of the Worker Grievance Mechanism, as detailed in the Labor Management Procedures • Preparation of a project-specific Labor Management Plan, taking into account the SREEPB Project Labor Management Plan (LMP)[8]

[8]https://webdosya.csb.gov.tr/db/kamuguclendirme/menu/sreepb-p175894_labormanagementprocedure_final_en_20210527080956.pdf

8. REPORTING

Details regarding the reporting requirements of the project are provided in the Environmental and Social Management Framework of the SREEPB Project, which is published on the project's website (https://kamuguclendirme.csb.gov.tr/en), and a summary is presented in Table 9.

Table 11 - Reporting Process Requirements List

RESPONSIBLE PARTY	REPORTING PROCESS REQUIREMENT
MoEUCC/PUB	• Preparation of the semi-annual Project Progress Report and submission to the World Bank (WB) • Reporting all significant incidents such as accidents, spills, or fatalities to the World Bank within 48 hours, and submission of an incident investigation report along with a corrective action plan to the World Bank within 30 working days • Monthly updates to the WB on the functioning of the Grievance Mechanism
CONSULTANT	• Preparation of ESMP implementation result reports for the review of the Administration • Preparation of monthly ESMP progress reports and submission to the Administration • Preparation of weekly GM reports and submission to the Administration • Immediate notification to PIU of any significant incidents such as accidents, spills, fatalities, or sexual harassment/exploitation
CONTRACTOR	• Preparation of monthly ESMP progress reports and submission to the Consultant for approval • Preparation of weekly GM reports and submission to the Consultant's Project Manager • Immediate notification to the Consultant of any significant incidents such as accidents, spills, fatalities, or sexual harassment/exploitation • Preparation of Incident/Accident and Root Cause Analysis Reports • Details of report content are provided in the Environmental and Social Management Framework

ANNEXES

ANNEX -1 Photographs of the Buildings Within the Scope of the Project

Figure 29 - Campus Entrance

Figure 30 - Atatürk Cultural Center

Figure 31 - Library

Figure 32 - Computer Engineering, Metallurgical and Materials Engineering Building

Figure 33 - Department of Electrical Engineering

Figure 34 - Department of Civil Engineering / 1

Figure 35 - Department of Civil Engineering / 2

Figure 36 - Department of Geological Engineering

Figure 37 - Chemical Engineering Laboratory / 1

Figure 38 - Chemical Engineering Laboratory / 2

Figure 39 - Department of Mechanical Engineering / 1

Figure 40 - Department of Mechanical Engineering / 2

Figure 41 - Guesthouse / 1

Figure 42 - Guesthouse / 2

Figure 43 - Faculty of Engineering Dean's Office / 1

Figure 44 - Faculty of Engineering Dean's Office / 2

Figure 45 - Rectorate Building

Figure 46 - Faculty of Technology Metal Workshop

Figure 47 - New Prefabricated Laboratory Building

ANNEX II Summaries of World Bank (WB) Environmental and Social Standards

Summary explanations of the World Bank Environmental and Social Standards (ESSs) are provided in the table below.

Table 12 - Summaries of World Bank Environmental and Social Standards

ESS	SUBJECT	SUMMARY REQUIREMENT
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	ESS1 sets out the Borrower's responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with each stage of a project supported by the World Bank through Investment Project Financing, to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs). Environmental and social assessment shall be based on current information/data and shall include a description of the project and all its relevant aspects, identification and determination of the nature of risks, impacts, and mitigation measures. The assessment shall prioritize disadvantaged and/or vulnerable social groups; assess the potential environmental and social risks and impacts of the project, examine project alternatives, and identify ways to improve project design and implementation to apply the mitigation hierarchy to adverse environmental and social impacts. It will also explore opportunities to enhance positive impacts of the project. Environmental and social assessment shall include stakeholder engagement as an integral part of the assessment process in accordance with ESS10. Under ESS1, the Borrower shall identify, assess, and manage the environmental and social risks and impacts of the project in a systematic manner throughout the project life cycle
ESS2	Labor and Working Conditions	The objectives of ESS2 are to: (i) promote safety and health at work; (ii) promote fair treatment, non-discrimination, and equal opportunity for project workers; (iii) protect workers, including vulnerable workers such as women, persons with disabilities, children of working age (as defined under ESS2), migrant workers, contracted workers, community workers, and primary supply workers; (iv) prevent the use of all forms of forced labor and child labor; (v) support the principles of freedom of association and collective bargaining of project workers in accordance with national law; and (vi) provide accessible grievance mechanisms for project workers to raise workplace concerns. The applicability and scope of implementation of ESS2 depend on the environmental and social assessment described in ESS1 and the type of employment relationship between the Borrower and the project workers. ESS2 requirements include the development and implementation of a written Labor Management Procedure (LMP) applicable to the project. These procedures will define how project workers will be managed in accordance with national law and the requirements of this ESS, and will include identification of the following: (i) working conditions and terms of employment, including non-discrimination and equal opportunity provisions (such as development and implementation of labor management procedures applicable to contractors and a Code of Conduct);

		(ii) protection of the workforce, including minimum age, prohibition of child labor, and forced labor; (iii) establishment and operation of grievance mechanisms for workers, including referral arrangements to the national system for potential Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) risks; (iv) occupational health and safety; (v) contracted workers; (vi) community workers; and (vii) inclusion of primary supply workers under the applicable framework.
ESS3	Resource Efficiency and Pollution Prevention and Management	ESS3 recognizes that economic activity and urbanization often result in pollution of air, water, and land, and consume limited resources in ways that may threaten people, ecosystem services, and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the well-being of present and future generations. At the same time, technologies and practices for more efficient and effective resource use, pollution prevention, and avoidance and reduction of greenhouse gas emissions have become more accessible and achievable. This ESS sets out the requirements for addressing resource efficiency and pollution prevention and management throughout the project life cycle, in a manner consistent with Good International Industry Practice. The assessment of risks and impacts related to relevant ESS3 requirements—including raw materials, water use, air pollution, hazardous materials, and hazardous waste—and the proposed mitigation measures are to be included in the Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP).
ESS4	Community Health and Safety	ESS4 recognizes that project activities, equipment, and infrastructure can increase the exposure of communities to risks and impacts. Additionally, communities already affected by the impacts of climate change may be more vulnerable to impacts that could arise from project activities. ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the responsibilities of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, due to specific circumstances, may be vulnerable to harm.
ESS5	Acquisition, Restrictions on Land Use and Involuntary Resettlement **(This ESS is not applicable to the SREEPB Project)**	ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and individuals. Project-related land acquisition or restrictions on land use may result in physical displacement (relocation, loss of residential land, or loss of shelter), economic displacement (loss of land, assets, or access to assets leading to loss of income sources or other means of livelihood), or both. The term "involuntary resettlement" refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources **(This ESS is not applicable to the SREEPB Project)**	The environmental and social assessment described in ESS1 shall take into account the direct, indirect, and cumulative impacts of the project on habitats and the biodiversity they support. This assessment shall consider threats to biodiversity such as habitat loss, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading, pollution, and incidental take, as well as the anticipated impacts of climate change. It shall determine the significance of biodiversity and habitats based on their vulnerability and irreplaceability at global, regional, or national levels, and shall also consider the differing values placed on biodiversity and habitats by project-affected parties and

		other relevant stakeholders.
ESS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities **(This ESS is not applicable to the SREEPB Project)**	This ESS acknowledges that Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities have identities and aspirations that are distinct from mainstream groups in national societies and are often disadvantaged by traditional models of development.
ESS8	Cultural Heritage	The Borrower shall avoid impacts on cultural heritage. Where avoidance is not possible, the Borrower shall identify and implement measures to address impacts on cultural heritage in accordance with the mitigation hierarchy. Where appropriate, the Borrower shall develop a Cultural Heritage Management Plan.
ESS9	Financial Intermediaries **(This ESS is not applicable to the SREEPB Project)**	Financial intermediaries shall establish and maintain an Environmental and Social Management System (ESMS) to identify, assess, manage, and monitor the environmental and social risks and impacts of subprojects on an ongoing basis.
ESS10	Stakeholder Engagement and Information Disclosure	This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can enhance the environmental and social sustainability of projects, strengthen project acceptance, and contribute significantly to successful project design and implementation. The Borrower will engage with stakeholders throughout the project life cycle, beginning such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations on project design with stakeholders. The nature, scope, and frequency of stakeholder engagement shall be proportionate to the nature and scale of the project and its potential risks and impacts. Stakeholder engagement is an inclusive process conducted throughout the project life cycle. When appropriately designed and implemented, it supports the development of strong, constructive, and responsive relationships that are critical for the successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of project development and is an integral part of the assessment, management, and monitoring of environmental and social risks and impacts of the project.

ANNEX III Suggestion & Grievance Form (Online)

The visual of the online form accessible at https://kadevoneri.csb.gov.tr/oneri.jsp?authorizationKey=91ed7a16-209f-4ada-a42f-46892f6a4440https://kadevoneri.csb.gov.tr/oneri.jsp is provided below.

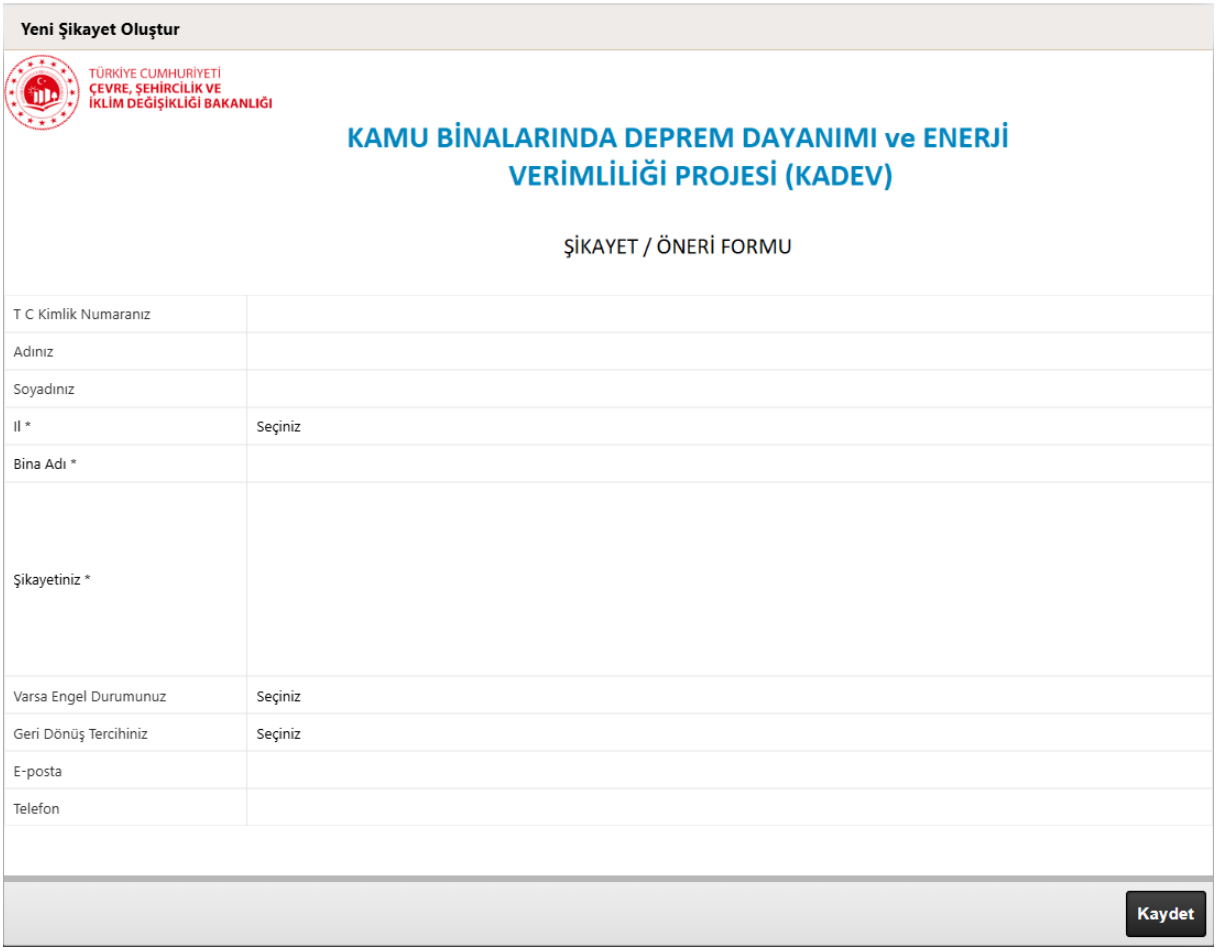


Figure 48 - Suggestion & Grievance Form

ANNEX IV Suggestion & Grievance Form (Printed)

The template Suggestion/Grievance Form to be placed in the Grievance Boxes is provided below.

GRIVEANCE FORM

Reference No		
Full Name		
Please mark how you wish to be contacted (mail, telephone, e-mail).		E-mail *(Please specify your e-mail address)* _____@_____
		Phone *(please specify the phone number at which you would like to be contacted)* (___) _____
		Post Code *(please indicate the postal address where you would like to be contacted)*
Province/District/Location		
Date		
Category of the Grievance		
1. On assets/properties impacted by the project		
2. On Infrastructure outages (electricity, water, internet, natural gas outages)		
3. On decrease or complete loss of sources of income (ex. school canteen)		
4. On employment		
5. On environmental issues (ex. garbage, dust, greasy floor)		
6. On health and safety (Unsafe construction activity)		
7. On traffic, transportation and other risks		
8. Other (if there is a special/confidential situation, please call the PIU directly):		X
Description of the Grievance What did happen? When did it happen? Where did it happen? What is the result of the problem?		
What would you like to see happen to resolve the problem?		
Although giving name and address is not compulsory, it should be kept in mind that during the feedback process regarding the grievance some problems may occur due to lack of information.		

Date:

Signature:

Figure 49 - Grievance Closure Form

ANNEX V Grievance Closure Form

The grievance closure form is provided below.

Grievance Closure No		
Description of Required Immediate Action:		
Description of Long-Term Action (if necessary):		
Is Compensation Required?	[ ] YES	[ ] NO
Control of Corrective Action and Decision		
Corrective Action Stage		Deadline and Responsible Institution
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Figure 50 - Grievance Closure Form

ANNEX VI Stakeholder Engagement Meeting Content & Records

Project Code: WB/CS-DESSUP-05
Meeting Venue: Elazığ Fırat University Computer Engineering Conference Hall
Date: 05.02.2026
Start | End Time: 10.00 | 11.30

A total of 145 participants attended the Stakeholder Engagement Meeting held on 05.02.2026, including 136 in person (48 women and 88 men) and 9 online (2 women and 7 men).
The tables below respectively present the meeting minutes summarizing the topics covered in the presentations, the questions and comments raised by participants along with the responses provided, photographs from the meeting, the list of participants from the PIU and Consultant levels, and a list of the slides used in the presentation.

Table 1. Stakeholder Engagement Meeting Minutes

Start Time	End Time	Content
10.00	**11.30**	**Opening Remarks of the Meeting**
		PRESENTATION I **General information on the SREEPB Project and the Subproject was provided — project objectives were explained.** **Information was given on project financing, duration, and details of the Consultant firm.** **A brief introduction was presented regarding the tasks to be carried out within the scope of the project.**
		

T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI
YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ

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KADEV

Kamu Binalarında Deprem Dayanımı ve Enerji Verimliliği Projesi (KADEV)

KADEV, Dünya Bankası kredisi ile Hazine ve Maliye Bakanlığı garantörlüğünde, **Çevre, Şehircilik ve İklim Değişikliği Bakanlığı Yapı İşleri Genel Müdürlüğü** tarafından yürütülen bir projedir.

KADEV Projesinin amacı,
✓deprem riski yüksek olan kamu binalarının depreme karşı güçlendirilmesi
✓enerji kullanımı bakımından verimsiz olan binaların enerji verimliliğinin sağlanmasıdır.

Proje ve Saha Kontrollüğü Danışmanlık Hizmetleri **Tima Mühendislik Müşavirlik Proje ve Yönetim A.Ş. & OBS Proje Mühendislik Müşavirlik LTD. ŞTİ İş Ortaklığı** tarafından sağlanmaktadır.

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T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI
YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ

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Proje Kapsamındaki Binalar

Grup-1		Grup-2		Grup-3		Grup-4	
FÜ Atatürk Kültür Merkezi	2.102	FÜ Su Ürünleri Fakültesi-İktisadi ve İdari Bilimler Fakültesi Sağlık Bilimleri Fakültesi	19.025	FÜ Tıp Fakültesi Dekanlık	20.604	FÜ Üniversite Evi/Yemekhane	6.391
Kütüphane Binası		FÜ Teknoloji Fakültesi	18.709	FÜ Eğitim Fakültesi A Binası	9.847	FÜ Veteriner Fakültesi	23.614
FÜ Bilgisayar Metalurji Ve Malzeme Mühendisliği	17.310	FÜ Teknoloji Fakültesi İnşaat Atölyesi	2.262	FÜ Eğitim Fakültesi B Binası	5.795	FÜ İlahiyat Fakültesi	7.828
FÜ Elektrik Mühendisliği Bölümü	5.482	FÜ Teknoloji Fakültesi Makine Atölyesi	2.322	FÜ Sağlık Hizmetleri Meslek Yüksekokulu-Sosyal Bilimler Meslek Yüksekokulu	7.741	FÜ Biyomühendislik	5.072
FÜ İnşaat Mühendisliği Bölümü	3.621						
FÜ Jeoloji Mühendisliği Bölümü	5.398						
FÜ Kimya Mühendisliği Laboratuvarı	1.446						
FÜ Makine Mühendisliği Bölümü	4.108						
FÜ Makine Mühendisliği Bölümü Ek Bina	2.929						
FÜ Misafirhane	1.478						
FÜ Mühendislik Fakültesi Dekanlığı	1.795						
FÜ Rektörlük Binası	4.335						
FÜ Teknoloji Fakültesi Metal Atölyesi	2.280						
Prefabrik Lab. Binası Yeni Yapım	2.150						

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Alt Proje Kapsamındaki Bina Görünümü

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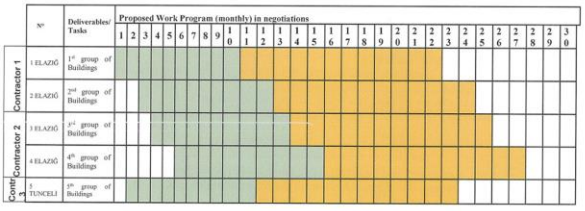
Proje Süresi

Proje, 2 fazdan oluşmaktadır.

•**Faz-1:** Yapısal Değerlendirme, Enerji Etüdü, Yapısal-Enerji Güçlendirme Tasarımı Danışmanlık Hizmetleri (*12 Ay*)

•**Faz-2:** İnşaat Kontrollüğü Danışmanlık Hizmetleri (*3 gruptan oluşmaktadır. Her bir grup 10 ay inşaat süreci ve 12 ay kusur sorumluluk süreci içermektedir.)*



timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş.

DBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ

<table>
<tr><td></td><td></td><td>
T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ — THE WORLD BANK IBRD • IDA | WORLD BANK GROUP — KADEV
KADEV PROJESİ FAZ-1 & FAZ-2 KAPSAMINDAKİ İŞLER
FAZ-1
• Saha Rölöve Çalışması(Statik-Mimari-Mekanik-Elektrik)
• Rölöve Projeleri
• Saha Ölçümlerinin Alınması
• Enerji Etüt Raporu
• Yapısal Performans Değerlendirme Raporu
• Çevresel ve Sosyal Yönetim Planı
• İş Sağlığı ve Güvenliği Planı
• Sosyal Raporlar
• Detaylı Tadilat ve Yenileme Tasarımları ,Teknik Şartname ve Yaklaşık Maliyet
• Ölçme ve Doğrulama Planı Hazırlanması
• Devreye Alma Planı Hazırlanması
FAZ-2
• İnşaat Yapım İşleri, İnşaat Kontrollüğü
timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş. — DBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ
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T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ — THE WORLD BANK IBRD • IDA | WORLD BANK GROUP — KADEV
Faz-1 Aşamasında Yapılacak İşler
Proje Faz-1 Aşamasında Deprem Dayanımı ve Enerji Verimliliği konu başlıklarında ayrı iki çalışma yapılmaktadır.
Deprem Dayanımı:
•Binaların yapısal inceleme ve değerlendirmelerinin yapılması
•Güçlendirme tasarımlarının yapılması
Enerji Verimliliği:
•Bina kabuğu ısı yalıtımı,
•Yüksek Verimli Pompa Kullanımı,
•Yüksek Verimli Motor Kullanımı ve Hız Sürücü Kullanımı
•Mevcut Kazanların Ekonomizörlü Kazanlar ile Değişimi
•Mevcut Mekanik Tesisatın Vana Ceketi ile Yalıtılması
•Split Klimaların Toplanarak VRF Ünitelerine Dönüştürülmesi
•Mevcut verimsiz armatürlerin Verimli LED Armatür ile Değişimi
•Bina çatı alanına Güneş Enerji Sistemi Kurulumu
•Enerji İzleme ve Otomasyon Sistemi Kurulumu
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</td></tr>
<tr><td>10.15</td><td>10.30</td><td>Provision of Information on Seismic Resilience</td></tr>
<tr><td></td><td></td><td>Information was provided on the seismic strengthening project and the construction methodologies to be applied.</td></tr>
</table>

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Deprem Dayanımı

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YAPISAL TAŞIYICI SİSTEM BELİRLENMESİ (RÖLÖVE)

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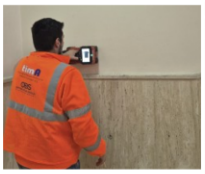
MALZEME KARAKTERİSTİK ÖZELLİKLERİNİN BELİRLENMESİ ÇALIŞMALARI



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ZEMİN KARAKTERİSTİK ÖZELLİKLERİNİN BELİRLENMESİ ÇALIŞMALARI

Bina No	Bina Adı	Yerel Zemin Sınıfı
1	FÜ Atatürk Kültür Merkezi	ZC
1A	FÜ Kütüphane	ZC
2	FÜ Bilgisayar Metalurji ve Malzeme Mühendisliği	ZC
3	FÜ Biyomühendislik	ZC
4	FÜ Eğitim Fakültesi A Blok	ZD
5	FÜ Eğitim Fakültesi B Blok	ZC
6	FÜ Elektrik Mühendisliği Bölümü	ZC
8	FÜ İnşaat Mühendisliği Bölümü	ZC
9	FÜ Jeoloji Mühendisliği Bölümü	ZC
10	FÜ Kimya Mühendisliği Laboratuvarı	ZC
11	FÜ Makine Mühendisliği Bölümü	ZC
12	FÜ Makine Mühendisliği Bölümü Ek Bina	ZC
13	FÜ Misafirhane	ZC
14	FÜ Mühendislik Fakültesi Dekanlığı	ZC
15	FÜ Rektörlük Binası	ZC
16	FÜ Sağlık Hizmetleri Meslek Yüksekokulu	ZD
18	FÜ Su Ürünleri Fakültesi	ZC
19	FÜ Teknoloji Fakültesi	ZC
20	FÜ Teknoloji Fakültesi İnşaat Atölyesi	ZC
21	FÜ Teknoloji Fakültesi Makina Atölyesi	ZC
22	FÜ Teknoloji Fakültesi Metal Atölyesi	ZC
23	FÜ Tıp Fakültesi-Dekanlık Diş Hekimliği	ZC
24	FÜ Üniversite Evi-Yemekhane	ZC
25	FÜ Veteriner Fakültesi	ZC
26	FÜ Yabancı Diller Yüksekokulu	ZC

Yerel Zemin Sınıfı	Zemin Cinsi	Üst 30 metrede ortalama		
		$(V_s)_{30}$ [m/s]	$(N_{60})_{30}$	$(c_u)_{30}$ [kPa]
ZA	Sağlam, sert kayalar	> 1500	-	-
ZB	Az ayrışmış, orta sağlam kayalar	760 – 1500	-	-
ZC	Çok sıkı kum, çakıl ve sert kil tabakaları veya ayrışmış, çok çatlaklı zayıf kayalar	360 – 760	> 50	> 250
ZD	Orta sıkı – sıkı kum, çakıl veya çok katı kil tabakaları	180 – 360	15 - 50	70 - 250

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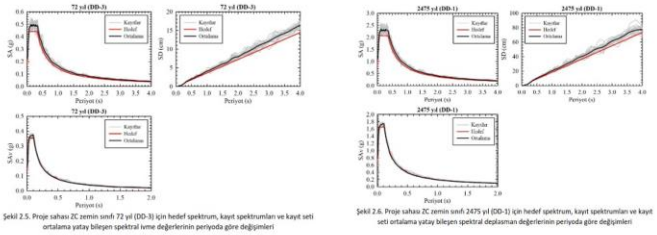
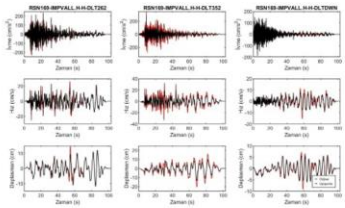
DEPREMSELLİK



Şekil 2.5. Proje sahası ZC zemin sınıfı 72 yıl (DD-3) için hedef spektrum, kayıt spektrumları ve kayıt seti ortalama yatay bileşen spektral ivme değerlerinin periyoda göre değişimleri

Şekil 2.6. Proje sahası ZC zemin sınıfı 2475 yıl (DD-1) için hedef spektrum, kayıt spektrumları ve kayıt seti ortalama yatay bileşen spektral deplasman değerlerinin periyoda göre değişimleri



Şekil E. 1-2. Kayıt-2 için ivme, hız ve deplasman zaman serileri (72 yıl).

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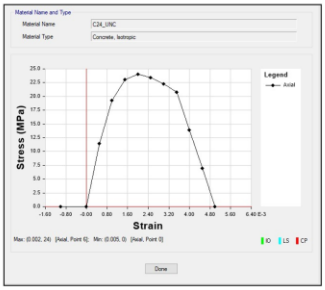
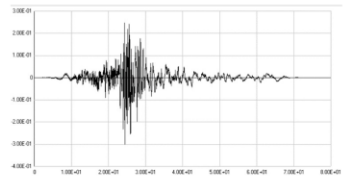
ANALİZ YÖNTEMİ

- **TBDY-2018**
- **ETABS:** Computers & Structures Inc. *Uluslararası Literatürde kabul görmüş güvenilir analiz programı*
- **Malzeme ve Yapısal Elemanların Doğrusal Olmayan Davranışlarının Tanımlanması**
- **DD-1 ve DD-3 Deprem Düzeyi için tanımlanan (2 x 11 = 22 Deprem Kaydı)**
- **Zaman Tanım Alanında Doğrusal Olmayan Analiz**
- Güncel deprem yönetmeliklerine uygun olarak, ileri hesap yöntemleri (doğrusal olmayan analiz) ile yapının deprem etkisi altındaki davranışı incelenir. Kullanılan yöntem, en güncel, en gerçekçi ve detaylı değerlendirme yöntemidir.





KESİT				MALZEME			ŞEKİLDEĞİŞTİRME KAPASİTELERİ					
Kolon Tipi	Kolon Durum	fck	fyk	fywk	b (m)	h (m)						
C35/80	Mevcut	24	420	420	0.35	0.8	0.0058	0.0044	0.0025	0.0320	0.0240	0.0075
C40/100	Mevcut	24	420	420	0.4	1	0.0062	0.0047	0.0025	0.0320	0.0240	0.0075
C40/85	Mevcut	24	420	420	0.4	0.85	0.00595	0.00446	0.0025	0.0320	0.0240	0.0075
C40/90	Mevcut	24	420	420	0.4	0.9	0.00644	0.00483	0.0025	0.0320	0.0240	0.0075
C60/65	Mevcut	24	420	420	0.6	0.65	0.00696	0.00522	0.0025	0.0320	0.0240	0.0075
C60/80	Mevcut	24	420	420	0.6	0.8	0.00663	0.00497	0.0025	0.0320	0.0240	0.0075
C60/85	Mevcut	24	420	420	0.6	0.85	0.0065	0.0049	0.0025	0.0320	0.0240	0.0075

Kolon Tipi	Kolon Durum	Kesit Tipi	fck	fyk	fywk	b (m)	h(m)	Vr,x- Vr-2	Vr,y- Vr-3	0.65*fctm*bw*d	1.30*fctm*bw*d	Ve,max
C35/80	Mevcut	Dikdörtgen	24	420	420	0.4	0.8	329	379	312	624	1166
C40/100	Mevcut	Dikdörtgen	24	420	420	0.4	1.0	498	609	446	892	1666
C40/85	Mevcut	Dikdörtgen	24	420	420	0.4	0.9	395	440	379	758	1416
C40/90	Mevcut	Dikdörtgen	24	420	420	0.4	0.9	463	548	401	802	1499
C60/65	Mevcut	Dikdörtgen	24	420	420	0.6	0.7	490	503	435	869	1624
C60/80	Mevcut	Dikdörtgen	24	420	420	0.6	0.8	571	621	535	1070	1999
C60/85	Mevcut	Dikdörtgen	24	420	420	0.6	0.9	597	660	568	1137	2124

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PERFORMANS HEDEFİ

Hangi Deprem Düzeyi?

Depremler, olma olasılıklarına bağlı olarak çeşitli düzeylerde tanımlanmıştır.
Küçük depremlerin olma olasılığı yüksektir, dolayısıyla sık gerçekleşir.
Büyük depremlerin olma olasılığı düşüktür, dolayısıyla nadir gerçekleşir.

Nasıl Bir Yapısal Performans?

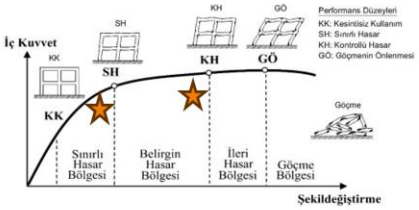
Sık Depremler (Sınırlı Hasar SH):

Kullanım devam etsin, hasar yok, ihmal edilebilir veya az/sınırlı hasar.

Çok Nadir Depremler (Kontrollü Hasar):

Ağır olmayan onarılabilen hasarlar,

Deprem Düzeyi	Olasılık	Dönüş Periyodu	Performans Hedefi
DD-4	%68 / 50 yıl	43 yıl	-
DD-3	%50 / 50 yıl	72 yıl	Sınırlı Hasar
DD-2	%10 / 50 yıl	475 yıl	-
DD-1	%2 / 50 yıl	2475 yıl	Kontrollü Hasar



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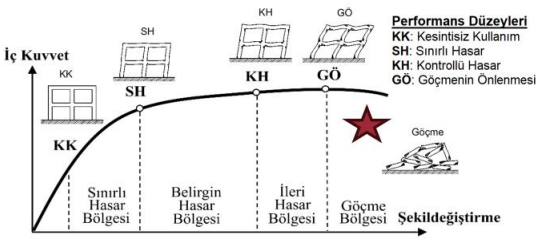
YAPILARIN GENEL MEVCUT DEPREM PERFORMANSI DURUMU

Göz önüne alınan deprem yer hareketi olan
DD-1
[Deprem Yer Hareketi Düzeyi-1] : 50 yılda %2
için
Yapı Performans Düzeyi
DD1: GÖÇME



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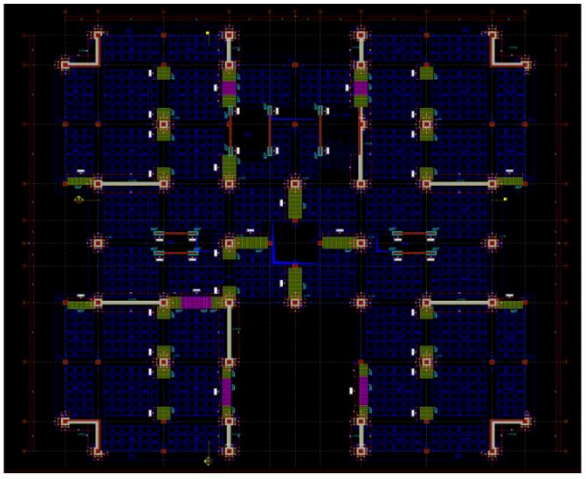
GÜÇLENDİRME METODOLOJİSİ



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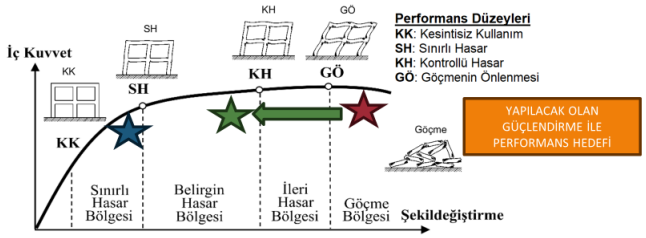
YAPILACAK OLAN GÜÇLENDİRME İLE YAPILARIN DEPREM PERFORMANSI

- DD-1 DEPREM DÜZEYİ MEVCUT DURUM DEPREM PERFORMANSI
- DD-1 DEPREM DÜZEYİ GÜÇLENDİRİLMİŞ DURUM DEPREM PERFORMANSI
- DD-3 DEPREM DÜZEYİ GÜÇLENDİRİLMİŞ DURUM DEPREM PERFORMANSI



Performans Düzeyleri
KK: Kesintisiz Kullanım
SH: Sınırlı Hasar
KH: Kontrollü Hasar
GÖ: Göçmenin Önlenmesi

YAPILACAK OLAN GÜÇLENDİRME İLE PERFORMANS HEDEFİ

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YIKIM SÖKÜM İŞLERİ

Görseller yürütülecek çalışmalara örnek olması amaçlı paylaşılmaktadır.

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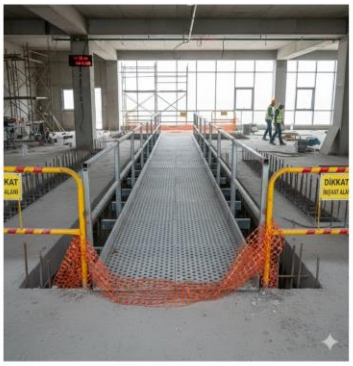
TEMEL SİSTEMİNİN TESPİTİ



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EPOKSİ İLE ANKRAJ FİLİZ EKİMİ
DELİCİ İLE ANKRAJ DELİĞİ AÇMA
ANKRAJ DELİKLERİNE EPOKSİ UYGULANMASI
EPOKSİ İLE FİLİZ EKİMİ
TEST VE MUAYENE
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		T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ THE WORLD BANK IBRD • IDA | WORLD BANK GROUP KADEV ***BETON İŞLERİ***  timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş. DBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ

		
		
10.30	**10.45**	Provision of Information on Energy Efficiency
		Information was provided on the energy efficiency works and implementation processes.

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Enerji Verimliliği

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Enerji Verimliliği Çalışmaları

Tunceli Kamu Binalarında gerçekleştirilen detaylı etüt çalışması ile; enerji tasarruf potansiyellerinin tespit edilmesi, enerji verimliliğinin arttırılmasına yönelik gerekli önlemlerin alınması ve burada elde edilen başarının kamuoyuna duyurulması amaçlanmaktadır.

Gerçekleştirilen bu etüt çalışmasının nihayetinde; konfor ve kaliteden ödün vermeden yakıt ve elektrik tüketiminin azaltılması, CO2 emisyonlarında azaltım sağlanması, personellerin ve hizmet alan vatandaşların iç ortam konfor şartlarının iyileştirilmesi, kamu sektöründe enerji verimliliği farkındalığının artması hedeflenmiştir.

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Enerji Verimliliği Çalışmaları

- Binaların mevcut durumlarının tespitlerinin yapılması için mimari, mekanik ve elektrik disiplinleri tarafından ayrı ayrı saha ziyaretleri yapılmaktadır.

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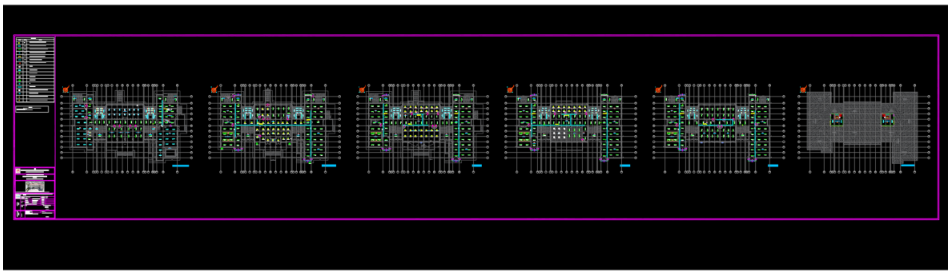
Enerji Verimliliği Çalışmaları

- Binaların mevcut durum tespitleri yapılarak, binaların mevcut durumlarını yansıtan rölöve projeleri hazırlanmaktadır.



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Enerji Verimliliği Çalışmaları

- Özellikle enerji tasarrufu sağlanabilecek tüm alanlarda gerekli incelemeler yapılarak veriler toplanmaktadır.

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Enerji Verimliliği Çalışmaları

- Bina kabuğunda incelemeler yapılmakta, ölçümler alınmaktadır.

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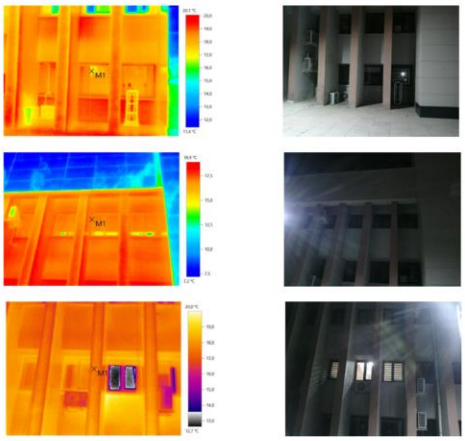
- Bina kabuğunda incelemeler yapılmakta, ölçümler alınmaktadır.



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Enerji Verimliliği Çalışmaları

- Sahada enerji tüketen sistemler üzerinde incelemeler yapılmıştır.

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Enerji Verimliliği Çalışmaları

- Sahada enerji tüketen sistemler üzerinde incelemeler yapılmıştır.

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Enerji Verimliliği Önlemleri

Enerji etüt çalışmaları sonucunda kampüs alanında bulunan tüm binalar için aşağıdaki enerji verimlilik önlemleri belirlenmiştir.

- Bina kabuğu ve çatı arasına ısı yalıtımı yapılması
- Camların 4+16+4 mm boşluklu kaplamalı cam ile değişimi
- Tesisat ekipmanlarının vana ceketi ile yalıtılması
- AKM binasına yeni soğutma sistemi yapılması
- Pompaların frekans invertörlü pompalar ile değişimi
- İç mekân verimsiz aydınlatma armatürlerinin LED aydınlatma armatürleri ile değiştirilmesi
- Otomasyon sisteminin kurulması
- Enerji izleme sisteminin kurulması
- 3 MW kurulu güce sahip arazi tipi GES kurulumu

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		T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ THE WORLD BANK IBRD • IDA | WORLD BANK GROUP KADEV **Tesisat Ekipmanlarının Vana Ceketi ile Yalıtılması** **ÖNCESİ** **SONRASI**   timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş. DBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ

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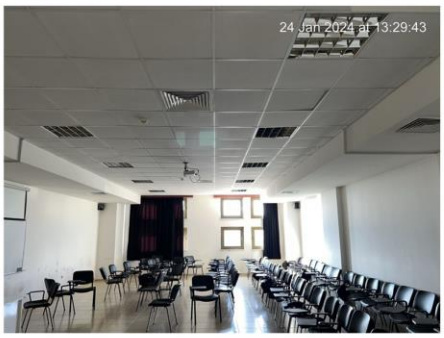
		T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ THE WORLD BANK IBRD • IDA | WORLD BANK GROUP KADEV **Verimsiz Aydınlatma Armatürlerinin LED Aydınlatma Armatürleri İle Değiştirilmesi** **ÖNCESİ** **SONRASI**   timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş. DBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ

		
10.45	**10.55**	Provision of Information on Environmental and Social Management
		Information was provided on environmental and social management considerations to be taken into account during construction works. Information was provided on different types of waste. Explanations were given regarding potential project impacts on soil, water, and air quality.
		

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Çevresel Yönetim Kapsamı

Çevresel ve Sosyal Yönetim Planı (ÇSYP); Fırat Üniversitesi Grup-1 binaları için proje kapsamında gerçekleştirilecek yapısal güçlendirme ve enerji verimliliği odaklı iyileştirme çalışmaları hakkında bilgi vermekte olup, söz konusu çalışmaların, yenileme faaliyetlerinin neden olabileceği olası olumsuz çevresel ve sosyal etkilerin kabul edilebilir düzeyde tutulabilmesi ve/veya ortadan kaldırılabilmesi için alınması gereken önlemleri içermektedir.

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Çevresel ve Sosyal Yönetim Kapsamı

- Faz I aşamasında hazırlanan, Çevresel ve Sosyal Yönetim Planı'nın Faz-2 aşamasında sahada yüklenici tarafından uygulanmasının denetlenmesi gerçekleştirilecektir.
- Proje yapım faaliyetleri sırasında oluşabilecek olası olumsuz sosyal ve çevresel etkilerin alınan tedbirlerle minimize edilmesi de bu Plan kapsamında ele alınacaktır.

Olası olumsuz etkiler şu şekilde özetlenebilir:

- **Atık oluşumu :** Çeşitli atık akışları ile uygun olmayan atık yönetiminden dolayı olası olumsuz çevresel etkiler ve sağlık etkileri meydana gelebilir (uygun olmayan atık yönetimi, suda ve toprakta doğrudan ve dolaylı kirlilik oluşturabilir ve hava kalitesini etkileyebilir)
- **Gürültü :** İşçilerin şantiyede bulunması, tadilat/inşaat işleri ve ulaşım araçlarının hareketleri, gürültü ve titreşim seviyesini artıracaktır.
- **Hava Kalitesi/Emisyon :** İnşaat faaliyetleri sırasında oluşabilecek toz ve kamyon emisyonları hava kalitesini etkileyebilecektir.
- **Su kalitesi** : İnşaat alanında oluşan atıksu/atıkların kontrolsüz bertarafı su kalitesini etkileyebilecektir.
- **Toprak kalitesi :** Tehlikeli madde ve atıkların toprağa karışması toprakta olumsuz etkilere sebep olabilir.
- Toplum Sağlığı ve Güvenliği/Trafik ve Yaya Güvenliği
- Şikayet mekanizmasının takibi / yönetimi
- Broşürlerin dağıtımının yönetilmesi
- Aylık Raporlama

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		b
		T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ — THE WORLD BANK IBRD • IDA | WORLD BANK GROUP — KADEV **Atık Yönetimi** **Tehlikeli Atıklar;** • Tehlikeli atıkların yönetimi, Atık Yönetimi Yönetmeliği uyarınca gerçekleştirilecektir. • Proje sahasında boya kutuları ve floresanlar gibi 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 ibaresine yer verilecek ve depolanan maddenin atık kodu, miktarı, içeriği, özellikleri, koruma koşulları ve depolama tarihi konteynerler üzerinde belirtilecektir. Tehlikeli maddeler azami 6 ay geçici olarak depolanabilir. Zararlı maddelerin saklandığı konteynerler ve atık yağlar toprak kalitesini korumak amacıyla toprağa dökülme ve sızıntıyı önlemek için sızdırmaz beton alanlara yerleştirilecektir. Geçici depolama alanlarının yer seçiminde üniversite yetkililerinin onayı alınacaktır. • Zehirli içeriğe sahip boyalar, eritici madde (solvent) ya da kurşun bazlı kimyasallar kullanılmayacaktır. timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş. — DBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ

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Atık Yönetimi

Evsel Atıklar;

•Oluşacak evsel 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, ağzı kapalı sıhhi çöp bidonlarında biriktirilecek, yetkili Belediyenin katı atık toplama sistemi aracılığıyla düzenli depolama sahalarına gönderilecektir.

Ambalaj Atıkları;

•Kontamine olmamış geri dönüştürülebilir atıkların (plastik, cam, kağıt, vb.) geri dönüşümü sağlanacaktır. Atıkların uygun biçimde ayrıştırılması için çalışanlara eğitim verilecektir.

•Tehlikeli maddeler ile kontamine olmuş ambalaj atıklarının tamamı, tehlikeli atık statüsünde değerlendirilecektir.

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Gürültü Yönetimi ve Hava Kalitesinin Kontrolü

İnşaat faaliyetleri sırasında özellikle yıkım aşamasında oluşacak toz ve gürültünün izin verilen sınırlar içinde kalabilmesini sağlamak amacıyla yüklenici, akredite laboratuvar aracılığıyla toz ve gürültü ölçümleri gerçekleştirecektir. Gürültünün limitleri aşması durumunda ilave tedbirler alınacak ve tüm bu çalışmalar müşavir kontrolünde yürütülecektir.

Projenin uygulanması aşamasında Yüklenici;
ÇSYP'yi destekleyici alt yönetim planları (Atık Yönetim Planı, Kirliliği Önleme Planı, Toplum Sağlığı ve Güvenliği Planı v.b.) hazırlayacak, planlar müşavir tarafından incelenecek ve Proje Uygulama Birimi (PUB) tarafından onaylanacaktır.

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10.55	**11.05**	Provision of Information on Social Management
		The scope of stakeholders within the project was explained. The functioning of the grievance mechanism was described, and information was provided on complaint channels. The content of training to be delivered to workers was outlined. The project's focus on sexual violence, sexual harassment, and sexual exploitation and abuse (SEA/SH), as well as the functioning of related mechanisms, was explained.
		T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ — THE WORLD BANK IBRD • IDA | WORLD BANK GROUP — KADEV **Sosyal Yönetim** timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş. — DBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ

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- Paydaş katılımı, bir projenin ya da sürecin çeşitli aşamalarında, o projeden doğrudan veya dolaylı olarak etkilenen tüm kişi, grup ve kurumların görüşlerini, endişelerini, önerilerini ve geri bildirimlerini dikkate alarak karar alma süreçlerine dahil edilmesini ifade eder.
- Bu süreç, projeyle ilgili tüm taraflar arasında açık ve etkili bir iletişim kurulmasını sağlayarak, daha kapsayıcı, şeffaf ve sürdürülebilir sonuçlar elde etmeyi amaçlar.

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Sosyal Yönetim / Öneri ve Şikayet Mekanizması

Şikayet kutuları; kampüs alanında bulunan 8 farklı noktaya yerleştirilmiştir:

- Rektörlük Binası (Giriş)
- Öğrenci Kafeteryası ve Fotokopi Merkezi (İnşaat, Metalurji, Makine Müh. Lab. Yakınında)
- Üniversite Evi Yemekhanesi (Eğitim Fakültesi A Blok Yakınında)
- Sosyal Merkez (Veterinerlik Fakültesi Bitişiği)
- Atatürk Kültür Merkezi
- Tıp Fakültesi Dekanlığı
- İktisadi İdari Bilimler Fakültesi ve Su Ürünleri Fakültesi
- İnşaat Mühendisliği Bölümü

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Sosyal Yönetim / Öneri ve Şikayet Mekanizması

- KADEV Projesi kapsamında yürütülecek faaliyetler sebebiyle ortaya çıkabilecek her türlü şikayet, görüş ya da önerinin toplanması için proje uygulama alanında hem yüklenici hem de müşavir tarafından iki sosyal uzman tam zamanlı olarak bulunacaktır.

- Paydaşlar, sözlü şikayetlerini proje faaliyet alanındaki şantiye şefi, sosyal uzmanlar ve proje müdürlerine iletebilirler.
- Projede çalışan işçilerin yerel halkla iletişime geçmesi yasaktır. Dolayısıyla sözlü şikayetlerinizi alamazlar.

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Sosyal Yönetim / Öneri ve Şikayet Mekanizması

ŞİKÂYET VE ÖNERİ FORMU*

Referans No	
Tam Adı *(İsim ve iletişim bilgilerinin paylaşılması zorunlu olmamakla birlikte, şikayet/görüş/önerileriniz ile ilgili geri bildirim sürecinde bilgi eksikliği nedeniyle bazı sorunların ortaya çıkabileceği unutulmamalıdır.)*	
Lütfen şikayet/öneri/görüşünüz ile ilgili olarak sizinle nasıl iletişim kurulmasını istediğinizi işaretleyin	E-posta *(lütfen e-posta adresinizi belirtiniz)* _____@_____ _
	Telefon *(lütfen sizinle iletişim kurulmasını istediğiniz telefon numaranızı belirtiniz)* (___) _____
	Posta *(lütfen sizinle iletişim kurulmasını istediğiniz posta adresinizi belirtiniz)*
İl/İlçe/Mahalle	
Tarih	
Şikâyet Kategorisi	
1. Projeden etkilenen varlıklar / mülkler hakkında	
2. Altyapıda oluşan kesintiler (elektrik, su, internet, doğal gaz kesintisi)	
3. Gelir kaynaklarının azalması veya tamamen kaybedilmesi üzerine (Kantin vs.)	
4. İstihdam kaynaklı (Yüklenici çalışanı)	
5. Çevre ile ilgili konularda (Çöp, toz, yağlı zemin, vs.)	
6. Sağlık ve Güvenlik tehlikesi (Güvensiz inşaat faaliyeti)	
7. Trafik, ulaşım ve diğer riskler hakkında	
8. Diğer (Lütfen belirtin):	
Şikâyetin Tanımı (Ne oldu? Ne zaman oldu? Nerede oldu? Sorunun sonucu nedir?)	
Sorunun çözümlenmesi konusunda ne tür aksiyonlar alınmasını bekliyor/öneriyorsunuz?	
İsim:	**İletişim Bilgisi:**

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Sosyal Yönetim / Öneri ve Şikayet Mekanizması

- Cinsiyet temelli şiddet ve cinsel sömürü ve taciz konularındaki şikâyetler için gizlilik bakımından aşağıda verilen ve anonim şikayetlere izin veren web tabanlı şikâyet sisteminin kullanılması önerilmektedir.
- Gizliliğin sağlanabilmesi adına, söz konusu web tabanlı şikâyet sistemine yetkilendirilmiş bir personelin giriş yetkisi olacaktır.
- Prosedürler, gereksiz idari aşamalardan kaçınarak olabildiğince basit tutulacaktır. Aynı zamanda adil, şeffaf ve ilgili kişiler için bilgilendirici olacaktır.
- Yanıtların verilmesi ve belirtilen sorunların çözülmesi için belirli bir zaman çerçevesi takip edilecektir; şikâyet çözümü için belirlenen süre maksimum 30 gündür.

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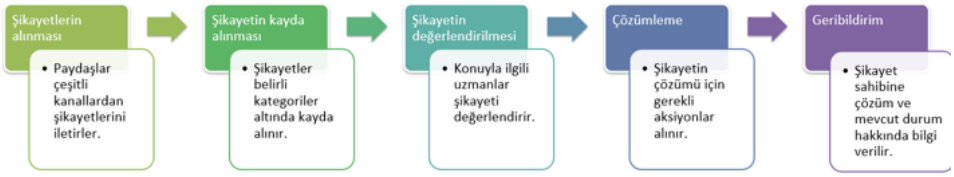
Sosyal Yönetim / Öneri ve Şikayet Mekanizması



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Sosyal Yönetim / Anketler

Yapım süreci öncesi, sırası ve sonrasında yapılacak anket çalışmaları projenin toplumsal etkilerinin izlenebilmesi için önemlidir.
Toplamda yapılacak üç anket şu şekildedir:

- Güçlendirme Öncesi farkındalık anketi
- Paydaş katılım toplantıları sırasında yapılacak memnuniyet anketi
- Güçlendirme işi sonrası memnuniyet anketi

Paydaşların anketleri doldurması, projenin toplum üzerindeki etkilerini daha iyi anlayabilmemiz ve gelecekteki çalışmalarımızı bu geri bildirimlere göre şekillendirmemiz açısından büyük önem taşımaktadır.

Katılımınız, projenin başarısını artırmak ve ihtiyaçlarınızı daha iyi karşılamak adına kritik bir rol oynayacaktır.

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Sosyal Yönetim / Eğitimler

Şikayet Mekanizması Eğitimi

Bu eğitim, şikayetleri toplayacak ekibin şikayet alma, kaydetme, değerlendirme ve geri bildirim süreçlerinde etkin olmasını sağlamak için gerekli bilgi ve becerileri kazandırmayı hedefler.

Cinsiyet Temelli Şiddet Eğitimleri

Toplumsal cinsiyet eşitliğini desteklemek ve cinsiyet temelli şiddeti önlemek amacıyla yükleniciye özel bir eğitim verilecektir. Bu eğitim, katılımcılara

- cinsiyet temelli şiddetin tanımı,
- etkileri,
- önleme stratejileri

hakkında bilgi sunarak farkındalığı artırmayı ve bu tür şiddetle mücadele etme yetkinliklerini geliştirmeyi amaçlamaktadır.

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11.05	**11.15**	Provision of Information on Occupational Health and Safety
		Key aspects related to occupational health and safety within the project were presented. Information was provided on the traffic plan to be implemented during construction and on occupational health and safety measures. Information was provided on persons who may be affected by risks/hazards on and off the construction site, emergency situations, and applicable standards. The occupational health and safety organizational structure and the Traffic Action Plan were explained.

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İş Sağlığı ve Güvenliği

Yüklenici firma; Müşavir tarafından hazırlanan İş Sağlığı Güvenliği Planı doğrultusunda, sorumlu olduğu tüm faaliyetleri kapsayan bir İŞ SAĞLIĞI GÜVENLİĞİ PLANI hazırlayarak Müşavirin onayına sunacak, bu planın uygun görülüp onaylanmasından sonra çalışmalarına başlayacaktır.

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İş Sağlığı ve Güvenliği Planı-Temel Kabuller

- İş Sağlığı ve Güvenliği Planı, **ulusal mevzuata uygun** ve **Dünya Bankası standartlarıyla uyumlu** olarak hazırlanmıştır.
- İnşaat faaliyetlerine başlanmadan önce **gerekli tüm yasal izinler** alınacaktır.
- Yapım sürecinde oluşabilecek **riskler belirlenmiş**, bu risklere yönelik **önleyici tedbirler** plan kapsamında tanımlanmıştır.
- Çalışma koşullarında oluşabilecek değişikliklere bağlı olarak, **riskler ve alınacak önlemler düzenli olarak gözden geçirilecektir**.
- Yapım faaliyetleri boyunca, **düzenli saha kontrolleri** ile planın uygulanması ve etkinliği izlenecektir.
- Plan, yalnızca şantiye çalışanlarını değil; **çevrede bulunan ve çalışmalardan etkilenebilecek tüm paydaşları** kapsayacak şekilde ele alınmıştır.
- İnşaat sahası içerisindeki mevcut yapıların yıkım ve taşınmasına ilişkin **gerekli güvenlik önlemleri ilgili kurum tarafından sağlanacaktır**.

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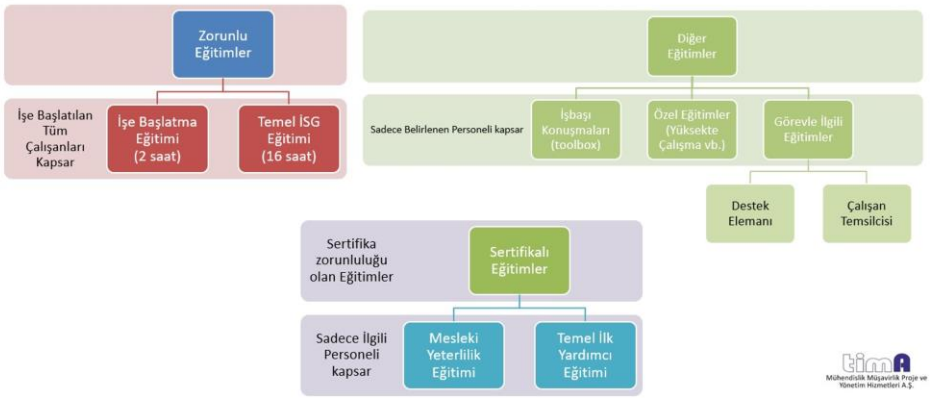
İş Sağlığı ve Güvenliği Eğitimleri



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İş Sağlığı ve Güvenliği Eğitimleri

MESLEKİ YETERLİLİK BELGESİ zorunluluğu olan aşağıdaki mesleklerde çalışacakların, Mesleki Yeterlilik Belgeleri yoksa çalıştırılamazlar.

İNŞAAT	İNŞAAT(devamı)	MEKANİK	ELEKTRİK
Ahşap Kalıpçı	Isı Yalıtımcısı	Çelik Kaynakçısı	Asansör Montajcısı-3 Asansör Montajcısı – 4
Alçı Levha Uygulayıcısı	Su Yalıtımcısı	Endüstriyel Boru Montajcısı	Elektrik Pano Montajcısı – 3 Elektrik Pano Montajcısı - 4, 5
Alçı Sıva Uygulayıcısı	Seramik Karo Kaplamacısı		Elektrik Tesisatçısı - 3 Elektrik Tesisatçısı – 4, 5
Betonarme Demircisi	İskele Kurulum Elemanı		Elektromekanik Montaj İşçisi - 3
Betoncu	İnşaat Boyacısı		Elektromekanik Montaj İşçisi - 4
Duvarcı	İnşaat İşçisi		Otomasyon Sistemleri Montajcısı -4
Kartonpiyer Uygulayıcısı	Sıvacı		Otomasyon Sistemleri Programcısı -5
Panel Kalıpçısı	Tünel Kalıpçı		Elektrik Dağıtımı Scada Opr.
PVC Doğrama Montajcısı	Yangın Yalıtımcısı		
Ses Yalıtımcısı			

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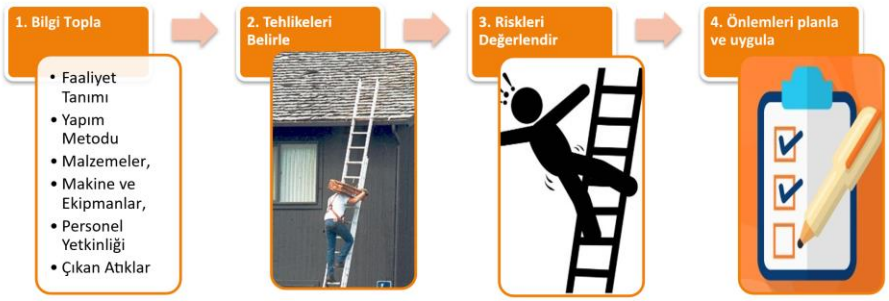
Tehlike Tanımlama ve Risk Değerlendirmesi

Sahada yürütülecek **faaliyetler başlamadan önce Tehlikeler belirlenir,** Riskler Değerlendirilir, risklere göre alınması gereken önlemler belirlenir ve uygulanır.



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Şantiye Sahasına Giriş-Çıkışlar, Ziyaretçiler

- Şantiye sahasına, görevi olmayan kişilerin girişi yasaktır; giriş-çıkışlar kontrollü şekilde sağlanacaktır.
- Şantiye alanı, çevre ile teması kesilecek şekilde fiziki olarak sınırlandırılacak ve uyarı levhaları yerleştirilecektir.
- Ziyaretçiler, şantiye sahasına **izin, bilgilendirme ve refakat** şartları sağlandıktan sonra alınacaktır.
- Ziyaretçiler, sahada bulundukları süre boyunca **belirlenen kişisel koruyucu donanımları** kullanmakla yükümlüdür.

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ASBEST İLE ÇALIŞMALARDA İŞ SAĞLIĞI VE GÜVENLİĞİ

25/01/2013 tarihli ve 28539 sayılı Resmi Gazete'de yayınlanan Asbestle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik hükümlerine göre asbestle ilgili yalnızca söküm, yıkım, tamir, bakım ve uzaklaştırma işlerine izin verilmektedir ve bu işler yalnızca gerekli eğitimleri almış yetkili uzman(asbest söküm uzmanı) ve çalışanlarca(asbest söküm çalışanı) yapılabilmektedir.

Gerekli önlemlerin alınmaması sonucu gerek yıkım faaliyeti sırasında gerekse asbestli atıkların taşınması sürecinde etrafa yayılacak asbest lifli tozlar çalışanlar dışında çevredeki yerleşimlerde yaşayanlar için "asbest maruziyeti" riskini oluşturabilecektir.

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ASBEST İLE ÇALIŞMALARDA İŞ SAĞLIĞI VE GÜVENLİĞİ

Asbest içeren muhtemel yapıların söküm, yıkım, tamir ve bakım işlerinde işveren tarafından aşağıdaki hususlara uyulur:

a)Çalışmaya başlamadan önce, asbest içerebilecek malzemeleri belirlemek için bina veya tesis sahibinden de bilgi alınarak gerekli araştırma yapılır.

b) Herhangi bir yapı veya malzemede asbest bulunduğu şüphesi veya bilgisi varsa çalışanların asbest tozuna maruziyetlerinin önlenmesi ve bu maruziyetten doğacak sağlık risklerinden korunması amacı ile;

- İş yeri ortam ölçümleri ve çalışanların kişisel maruziyet ölçümleri yapılarak risk değerlendirmesinin yapılması,
- Teknik olarak çalışma yöntemlerinin belirlenmesi(havalandırma, ıslak kesim, sökme)
- Çalışanların, çalışma sürelerinin belirlenmesi,

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ASBEST İLE ÇALIŞMALARDA İŞ SAĞLIĞI VE GÜVENLİĞİ

- Sigara içilmemesi de dahil, uyulması gereken hijyen kurallarının belirlenmesi,
- KKD kullanımı, (Koruyucu giysi, Tek kullanımlık eldiven, P 3 koruma seviyesine sahip partikül filtresi ile tam yüz maskesi)
- Sınır değerin aşılması ihtimali olan yerlere uyarı levhalarının konulması, görevli olanların dışında ki çalışanların girmesinin önlenmesi,
- İşyeri Hekimi tarafından, çalışanlara maruziyetin sona ermesinden sonra da yapılması gereken sağlık değerlendirmeleri ile ilgili bilgi verilmesi,
- Asbest veya asbestli malzemeden çıkan tozun, tesis veya çalışma alanı dışına yayılmasının önlenmesi
- Asbest içeren atıkların, her gün mesai bitiminde toplanmalı, asbest işareti taşıyan poşetlere konulmalı ve işyerinde düzenli biçimde depolanmalıdır. Atık prosedürleri ile ilgisi olmayan personelin atıklara erişimini engellemek için gerekli uyarı ve koruyucular yerleştirilmesi,

timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş.
OBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ

T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI
YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ
THE WORLD BANK IBRD • IDA | WORLD BANK GROUP
KADEV

İş Sağlığı ve Güvenliği / Trafik Eylem Planı

- Her bina için Trafik Eylem Planı hazırlanmıştır.

timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş.
OBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ

		T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ THE WORLD BANK IBRD • IDA | WORLD BANK GROUP KADEV **İş Sağlığı ve Güvenliği / Trafik Eylem Planı** • Arazi Tipi GES Trafik Eylem Planı  timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş. DBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ
11.15	**11.30**	Sunum sonrası katılımcıların soruları Müşavir ve Bakanlık yetkilileri koordinesinde cevaplanmıştır.
		T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ THE WORLD BANK IBRD • IDA | WORLD BANK GROUP KADEV T.C. ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ **SORU & CEVAP** YAPI İŞLERİ GENEL MÜDÜRLÜĞÜ timA Mühendislik Müşavirlik Proje ve Yönetim Hizmetleri A.Ş. DBS DEPREM MÜHENDİSLİĞİ ÇÖZÜMLERİ

Table 2. Stakeholder Engagement Meeting Questions and Responses

Participant	Question / Comment	Respondent	Response
Participant 1	Is there an automation system in place? The gallery voids in the existing structures create heat loss — will these be renovated? Also, what level of savings will be achieved through the PV system to be installed?	F.Ö.	The automation system will be installed in all buildings and integrated centrally within the Directorate of Construction Affairs. Works are being carried out for the 25 buildings within our scope, including mechanical and insulation improvements in existing installations. Under the PV system, savings equivalent to approximately 80% of current consumption are expected.
Participant 2	Will there be planning regarding the condition of items in offices during construction?	A.A.	Equipment that may be affected during construction will be relocated if possible. If relocation is not feasible or there is no alternative space, equipment will be covered with protective materials (OBS) where necessary.
Participant 3	Before relocation, will assistance be provided for moving items to the designated locations?	F.Ö.	For areas where jacketing or shear wall works will not be undertaken, relocation may not be required; however, locked areas may attract worker curiosity. Decisions during the relocation stage will be coordinated with you throughout the process.
Participant 4	It is important for first-year students to attend classes in their department to acclimate. Delivery before the new academic year would be beneficial. Avoiding negative publicity on social media is also important. I have concerns regarding the durability of department cabinets — is there a standard procedure? (same question continued) (same question continued)	F.Ö.	The project's grievance mechanism is actively functioning to manage such issues. Regarding delivery timelines, prioritization of laboratory buildings will be considered when the Contractor prepares the work schedule.
		Z.H.T.	Within the grievance mechanism, the hotline indicated in the project brochures is connected to the desk phone of the social specialist on the administrative side. This is one of the primary measures taken to prevent issues escalating to social media.
		M.Y.	The Vice Rector provided detailed information on arrangements regarding temporary relocation and settlement processes for all buildings and expressed appreciation to department heads.
Participant 5	If asbestos-containing lines are encountered during work, will measures be	S.B.	Asbestos and exposure measures will be conducted, and mitigation will be carried out by trained personnel.

	taken? (same question continued)	T.Y.	Asbestos measurements are conducted prior to demolition in every building. If asbestos is present, it will be removed and handed over to licensed companies for disposal.
Participant 6	LED fixtures and light quality are very important as lighting quality significantly affects working comfort.	F.Ö.	Lighting fixtures are selected based on preliminary assessments conducted in line with survey reports.
Participant 7	A general administrative-level meeting should be organized to ensure academic and administrative processes are not disrupted during strengthening works.	M.Y.	Such a meeting can be organized.

Table 3. Stakeholder Engagement Meeting Photos

Meeting Photos



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ZEMİN KARAKTERİSTİK ÖZELLİKLERİNİN BELİRLENMESİ ÇALIŞMALARI

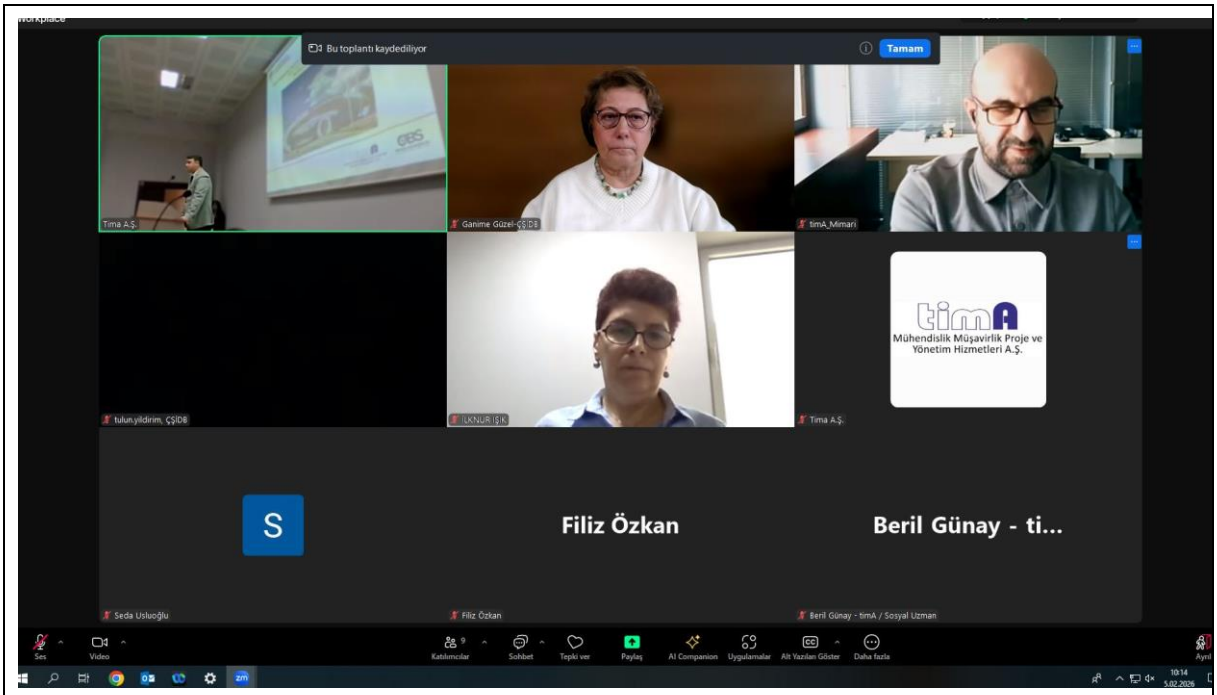

Table 4. Stakeholder Engagement Meeting Participants List (Online)

List of Participants
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.

Tablo 5. Stakeholder Engagement Meeting Participants List (In Person)

List of Participants
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.