

Environmental & Social Screening and Mitigation Checklist

Instructions:

Environmental and Social Focal Persons (ESFPs)¹ nominated by the MCs for PCP environmental and social management, will use this checklist in field for environmental and social screening and categorization of each and every sub-project proposed to be executed under the Program.

Deputy Program Officers-Environmental and Social Management deputed by PMDFC in regional offices will technically assist and support the ESFPs/MCs in filling in of this Checklist

It is to be attached with the main document² of sub-projects at planning stage and will be duly signed by the relevant ESFP and endorsed by the respective DPO-ESM

This checklist focuses on environmental issues and social concerns. To ensure that social dimensions are adequately considered, Involuntary Resettlement Screening Checklist will also be used

(iii) The purpose of this E&S Screening Checklists is to identify potential “Negative” impacts of environmental and social attributes or to enhance the existing environmental & social benefits. Use the “remarks” section to discuss any anticipated mitigation measures.

Name of ESFP:	Muhammad Ahmad MOI&S/ Muhammad Dawood MOP						
Name of MC:	Jhelum						
Sub-Project Sector:	Street Lights						
Sub-Project Title:	Improvement of Street Light along Jida Road Jhelum						
Sub- Project Categorization:	<table border="0"> <tr> <td>E-1</td> <td>S-1</td> </tr> <tr> <td>E-2</td> <td>S-2</td> </tr> <tr> <td>E-3✓</td> <td>S-3✓</td> </tr> </table>	E-1	S-1	E-2	S-2	E-3✓	S-3✓
E-1	S-1						
E-2	S-2						
E-3✓	S-3✓						
Date of Screening:	05-10-2022						
Anticipated Project Activities	(1) Earthwork excavation (2) Development of foundations for street light pole.3 installation of poles, transformers, street light control panels, LED lights equipment'						
Estimated Cost of Subprojects	120 (millions)						
Estimated Cost of E&S Mitigation Measures	0.5 (millions)						
Completion Time/Duration	3 Month						
Estimated Labor for Subproject	3-4 at one time						

¹ In all MCs, ESFPs are notified by Local government; MO (I&S) are focal persons for environmental sector and MO(P) are focal persons for social sectors.

² It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?		✓	Not observed in sub project area
Legally protected Area		✓	Any water body not observed in sub project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project ³		✓	No Wild life park or other biodiversity areas observed in sub project area
Estuarine		✓	Any buffer zone for fauna and flora not exist surrounding the project area
Special area for protecting biodiversity		✓	Not observed in sub project area
Buffer zone of protected area		✓	No Wild life park or other biodiversity areas observed in sub project area
Mangroves Forest		✓	Any buffer zone for fauna and flora not exist surrounding the project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		✓	any area of environmental importance such as forest /game reserve, orchid /crops no exist around the project intervention
Socially sensitive /important areas/communities/people?			
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/historical site) within 100 m of the proposed subproject ⁴		✓	Any Physical Cultural Resources (PCRs) are Not observed in sub project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project ⁵	✓		1 Schools exist within 100m of the subproject interventions. There would be hindrance in the mobility of people during installation of poles, transformers, street light control panels, LED lights etc. However, this will be a temporary impact and would be managed by proper controlling the traffic by display sign boards. No other significant adverse impacts on sensitive receptors are foreseen.
Any graveyard of local community (Muslims or Christians)		✓	Not observed adjacent to sub project area
Any demographic or socio-economic aspects of the sub-project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ⁶ of the society and women or children)?		✓	No negative impact observed on vulnerable groups (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities) sub project area
Already existing infrastructure ⁷ (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		✓	All construction activities on central Median line of dual roads and dismantling of this line at frequent places for establishment of foundations for poles
B. Potential Environmental Impacts Will the Sub-Project cause...			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	Not observed in sub project area
2. Cutting of trees?		✓	No Cutting of trees involved during construction phase
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	Not observed in sub project area

Screening Questions	Yes	No	Remarks
4. Generation of wastewater during construction or operation?		✓	Construction activities on minor level so waste water generation activities on lower level and not have significant impact
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		✓	Not observed in sub project area
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?		✓	No water body observed near in the sub project area and have no significant impact on surface water hydrology
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		✓	Local labor will be hired by the MC
8. Over pumping of ground water, leading to salinization and ground subsidence?		✓	Not observed in sub project area
9. Serious contamination of soil due to construction works?		✓	Not observed in sub project area
10. Aggravation of solid waste problems in the area?		✓	No aggravation of solid waste problems in the area is anticipated. During construction activities. The waste construction material will be collected and disposed at designated place on daily basis
11. Generation of hazardous waste?		✓	No hazardous waste generation is expected during execution of the subproject. However new electric transformers of 25KVA each will be installed in the subproject area. During operation phase of the subproject, these transformers may require replacement/overhauling.
12. Increased air pollution due to sub-project construction and operation?		✓	The subproject interventions are on small scale that will not increase air pollution
13. Noise and vibration due to sub-project construction or operation?		✓	Not observed in sub project area
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		✓	Not observed in sub project area
15. Use of chemicals during construction?		✓	Not observed in sub project area
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?			Any Physical Cultural Resources (PCRs) are Not observed in sub project area

³ Ibid.

⁴ According to Environmental Assessment Guidelines adopted by Punjab EPA

⁵ Ibid.

⁶ due to caste, creed, religion or gender e.g. transgender

⁷ Sewerage /Drainage system, Water supply lines, tube-wells, WAPDA/Telephone transmission lines/electric poles, Railway tracks, Gas pipelines, Roads, Shops/Plazas, Banks, Industry, Disposal stations etc.

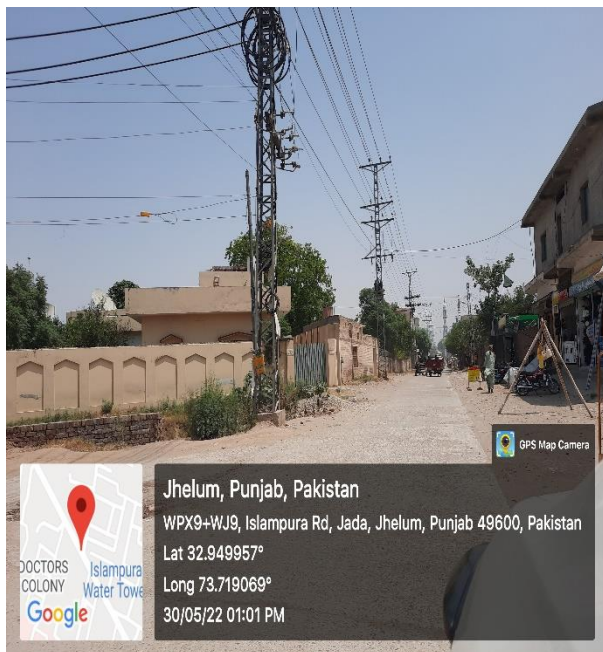
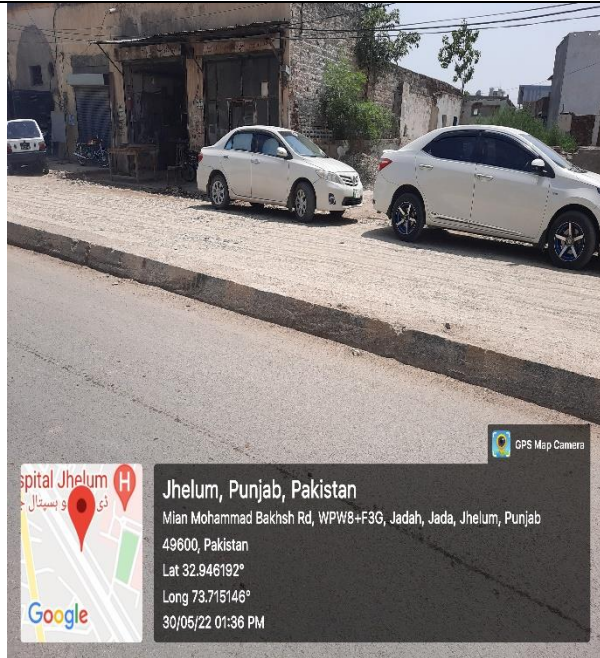
Screening Questions	Yes	No	Remarks
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If “Yes”, please also fill Involuntary Resettlement Screening Checklist)		✓	The subproject interventions are on small scale so Displacement or involuntary resettlement type impacts Not observed in sub project area
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁸ (mentioned above)?		✓	Not observed in sub project area
4. Temporary impediments in movements of people/transport and animals?	✓		There would be hindrance in the mobility of people during installation of poles, transformers, street light control panels, LED lights etc. However, this will be a temporary impact and would be managed by proper controlling the traffic.
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		✓	Not observed in sub project area
6. Social conflicts if workers from other areas are hired?		✓	The subproject interventions are on small scale and required minimum labor force for activities so this impact is minimized.
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	✓		There would be safety issues during installation of poles, transformers, street light control panels, LED lights etc. SOPs for health and safety have been included in the PC-I that have to be followed by the contractors particularly the SOPs of work at height.
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	✓		There would be some safety issues during transportation of poles, foundation bases, transformers, PVC pipes cables etc. Community awareness and consultation will be carried out before execution.
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	✓		There would be some safety issues during installation. The SOPs for health and safety have been included in the PC-I that have to be followed by the contractors.
10. Any impact on sensitive receptors (mentioned above)		✓	1 Schools exist within 100m of the subproject interventions. There would be hindrance in the mobility of people during installation of poles, transformers, street light control panels, LED lights etc. However, this will be a temporary impact and would be managed by proper controlling the traffic by display sign boards. No other significant adverse impacts on sensitive receptors are foreseen.
11. Any impact of negative nature on already existing infrastructure including public amenities		✓	All construction activities on central Median line of dual roads and dismantling of this line at

⁸ Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

Screening Questions	Yes	No	Remarks
			frequent places for establishment of foundations for poles

Prepared By: Name: Mujhammad Hanan Designation: Env Specialist Signature	Reviewed By: Name: Tehmina Kiran Designation: PO ESM-PMDFC Signature	Endorsed By: Name: Muhmmad Ahmad Designation: MOI&S Signature
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Pictures of Project Siting



INVOLUNTARY RESETTLEMENT SCREENING CHECKLIST

Name of City/MC/LG: Jehlum, Muhammad Dawood MOP

Sub-Project Sector: Street Lights

Sub-Project Title: Improvement of Street Light along Jida Road Jhelum

Sub- Project Categorization: E-3 & S-3

Date of Screening: 05-10-2022

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		Central median line of circular Road used for this intervention
If yes, then describe the type of land being acquired from the categories below:		✓		No Land acquired for this sub project
Has any AED been conducted at the proposed location by the government ¹ ? Yes/No		✓		Not observed in sub project area and confirm by MC Staff also
Land (Quantify and describe types of land being acquired in “remarks column”).		✓		No Land acquired for this sub project
Government and LG owned land free of occupation (agriculture or settlement)		✓		Already road exist and land is owned by govt
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		No Land acquired for this sub project
Private land		✓		No Land acquired for this sub project
Residential		✓		No Land acquired for this sub project
Commercial		✓		No Land acquired for this sub project
Agricultural		✓		No Land acquired for this sub project
Communal		✓		No Land acquired for this sub project
Others (specify in “remarks”).		✓		Already road exist and land is owned by govt
Name of owner/owners and type of ownership document if available.		✓		Already road exist and land is owned by govt
If land is being acquired, describe any structures constructed on it		✓		No Land acquired for this sub project
Land-based assets:		✓		No Land acquired for this sub project
Residential structures		✓		No Land acquired for this sub project

Commercial structures (specify in “remarks”)		✓		No Land acquired for this sub project
Community structures (specify in “remarks”)		✓		No Land acquired for this sub project
Agriculture structures (specify in “remarks”)		✓		

Public utilities (specify in “remarks”)	✓			Already road exist and land is owned by Govt.
Others (specify in “remarks”)		✓		No Land acquired for this sub project
If agricultural land is being acquired, specify the following:		✓		No Land acquired for this sub project
Agriculture related impacts		✓		No Land acquired for this sub project
Crops and vegetables (specify types and cropping area in “remarks”).		✓		No Land acquired for this sub project
Trees (specify number and types in “remarks”).		✓		No Land acquired for this sub project
Others (specify in “remarks”).		✓		No Land acquired for this sub project
Affected Persons (APs)		✓		No Persons Affected during this Project
Will any people be displaced from the land when acquired? Yes/No		✓		No Land acquired for this sub project
Number of APs		✓		No Persons Affected during this Project
Males		✓		No Persons Affected during this Project
Females		✓		No Persons Affected during this Project
Titled landowners		✓		No Land acquired for this sub project
Tenants and sharecroppers		✓		No Land acquired for this sub project
Leaseholders		✓		No Land acquired for this sub project
Agriculture wage laborers		✓		Not involved in this project
Encroachers and squatters (specify in remarks column)		✓		No Land acquired for this sub project
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons, and those below the poverty line). Specify the number and vulnerability in “remarks”.		✓		Not involved in this project
Others (specify in “remarks”)		✓		Not involved in this project
How will people be affected?		✓		No Persons Affected during this Project

Prepared By:	Reviewed By:	Endorsed By:
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Name: Muhammad Imran	Name: Tehmina Kiran	Name: Muhmmad Ahmad
Designation: Env Specialist	Designation: PO ESM-PMDFC	Designation: MOI&S
Signature	Signature	Signature

Environmental & Social Screening Checklist

Instructions:

Environmental and Social Focal Persons (ESFPs)⁹ nominated by the MCs for PCP environmental and social management, will use this checklist in field for environmental and social screening and categorization of each and every sub-project proposed to be executed under the Program.

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It is to be attached with the main document¹⁰ of sub-projects at planning stage and will be duly signed by the relevant ESFP and endorsed by the respective DPO-ESM

This checklist focuses on environmental issues and social concerns. To ensure that social dimensions are adequately considered, Involuntary Resettlement Screening Checklist will also be used

(iii) The purpose of this E&S Screening Checklists is to identify potential “Negative” impacts of environmental and social attributes or to enhance the existing environmental & social benefits. Use the “remarks” section to discuss any anticipated mitigation measures.

Name of ESFP:	Muhammad Ahmad MOI&S/ Muhammad Dawood MOP						
Name of MC:	Jhelum						
Sub-Project Sector:	Roads & Street Lights						
Sub-Project Title:	Improvement of Street Light along Thalian wala Road- Jhelum						
Sub- Project Categorization:	<table border="0"> <tr> <td>E-1</td> <td>S-1</td> </tr> <tr> <td>E-2</td> <td>S-2</td> </tr> <tr> <td>E-3✓</td> <td>S-3✓</td> </tr> </table>	E-1	S-1	E-2	S-2	E-3✓	S-3✓
E-1	S-1						
E-2	S-2						
E-3✓	S-3✓						
Date of Screening:	05-10-2022						
Anticipated Project Activities	(1) Earthwork excavation undressed lead up to a single throw of Kassi, phaorah or shovel (2) Development of foundations for street light pole.3 installation of poles, transformers, street light control panels, LED lights equipment’						
Estimated Cost of Subprojects	120 (millions)						
Completion Time/Duration	3 Month						
Estimated Labor for Subproject							

⁹ In all MCs, ESFPs are notified by Local government; MO (I&S) are focal persons for environmental sector and MO(P) are focal persons for social sectors.

¹⁰ It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?		✓	Not observed in sub project area
Legally protected Area		✓	Any water body not observed in sub project area
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project ¹¹		✓	No Wild life park or other biodiversity areas observed in sub project area
Estuarine		✓	Any buffer zone for fauna and flora not exist surrounding the project area
Special area for protecting biodiversity		✓	Not observed in sub project area
Buffer zone of protected area		✓	No Wild life park or other biodiversity areas observed in sub project area
Mangroves Forest		✓	Any buffer zone for fauna and flora not exist surrounding the project area
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		✓	any area of environmental importance such as forest /game reserve, orchid /crops no exist around the project intervention
Socially sensitive /important areas/communities/people?			
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/historical site) within 100 m of the proposed subproject ¹²		✓	Any Physical Cultural Resources (PCRs) are Not observed in sub project area
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project ¹³	✓		1 Schools exist within 100m of the subproject interventions. There would be hindrance in the mobility of people during installation of poles, transformers, street light control panels, LED lights etc. However, this will be a temporary impact and would be managed by proper controlling the traffic. No other significant adverse impacts on sensitive receptors are foreseen.
Any graveyard of local community (Muslims or Christians)		✓	Not observed adjacent to sub project area
Any demographic or socio-economic aspects of the sub-project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹⁴ of the society and women or children)?		✓	No negative impact observed observed on vulnerable groups (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities) sub project area
Already existing infrastructure ¹⁵ (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		✓	All construction activities on central Median line of dual roads and dismantling of this line at frequent places for establishment of foundations for poles
B. Potential Environmental Impacts Will the Sub-Project cause...			
16. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	Not observed in sub project area

Screening Questions	Yes	No	Remarks
17. Cutting of trees?		✓	No Cutting of trees involved during construction phase
18. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	Not observed in sub project area
19. Generation of wastewater during construction or operation?		✓	Construction activities on minor level so waste water generation activities on lower level and not have significant impact
20. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		✓	Not observed in sub project area
21. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?		✓	No water body observed Near in sub project area not have significant impact on surface water hydrology
22. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		✓	Despite of organizing worker camp for project, a rental house practices adopt for worker and all these impurities manages by proper planning
23. Over pumping of ground water, leading to salinization and ground subsidence?		✓	Not observed in sub project area
24. Serious contamination of soil due to construction works?		✓	Not observed in sub project area
25. Aggravation of solid waste problems in the area?		✓	No aggravation of solid waste problems in the area is anticipated. During construction activities The waste construction material will be collected and disposed at designated place on daily basis
26. Generation of hazardous waste?		✓	No hazardous waste generation is expected during execution of the subproject. However new electric transformers of 25KVA each will be installed in the subproject area. During operation phase of the subproject, these transformers may require replacement/ overhauling. The waste transformer oil so generated is classified as hazardous waste that will require special containment and disposal. IESCO will be made responsible to take care of reclamation/ overhauling of transformers and proper disposal of hazardous waste so generated.

¹¹ Ibid.

¹² According to Environmental Assessment Guidelines adopted by Punjab EPA

¹³ Ibid.

¹⁴ due to caste, creed, religion or gender e.g. transgender

¹⁵ Sewerage /Drainage system, Water supply lines, tube-wells, WAPDA/Telephone transmission lines/electric poles, Railway tracks, Gas pipelines, Roads, Shops/Plazas, Banks, Industry, Disposal stations etc.

Screening Questions	Yes	No	Remarks
27. Increased air pollution due to sub-project construction and operation?		✓	The subproject interventions are on small scale that will not increase air pollution
28. Noise and vibration due to sub-project construction or operation?		✓	Not observed in sub project area
29. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		✓	Not observed in sub project area
30. Use of chemicals during construction?		✓	Not observed in sub project area
C: Potential Social Impacts			
Will the Sub-Project cause...			
12. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?	Any Physical Cultural Resources (PCRs) are Not observed in sub project area		
13. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If “Yes”, please also fill Involuntary Resettlement Screening Checklist)		✓	The subproject interventions are on small scale so Displacement or involuntary resettlement type impacts Not observed in sub project area
14. Disproportionate impacts on the poor, women and children and or other vulnerable groups ¹⁶ (mentioned above)?		✓	Not observed in sub project area
15. Temporary impediments in movements of people/transport and animals?	✓		There would be hindrance in the mobility of people during installation of poles, transformers, street light control panels, LED lights etc. However, this will be a temporary impact and would be managed by proper controlling the traffic.
16. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		✓	Not observed in sub project area
17. Social conflicts if workers from other areas are hired?		✓	The subproject interventions are on small scale and required minimum labor force for activities so this impact is minimized.
18. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	✓		There would be safety issues during installation of poles, transformers, street light control panels, LED lights etc. The SOPs for health and safety have been included in the PC-I that have to be followed by the contractors.
19. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	✓		There would be some safety issues during transportation of poles, foundation bases, transformers, PVC pipes cables etc.

¹⁶ Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

Screening Questions	Yes	No	Remarks
20. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?	✓		There would be some safety issues during martial transportation and road compaction. The SOPs for health and safety have been included in the PC-I that have to be followed by the contractors.
21. Any impact on sensitive receptors (mentioned above)		✓	Not observed in sub project area
22. Any impact of negative nature on already existing infrastructure including public amenities		✓	All construction activities on central Median line of dual roads and dismantling of this line at frequent places for establishment of foundations for poles

Prepared By:	Reviewed By:	Endorsed By:
Name: Muhammad Imran	Name: Tehmina Kiran	Name: Muhmmad Ahmad
Designation: Env Specialist	Designation: PO ESM-PMDFC	Designation: MOI&S
Signature	Signature	Signature

INVOLUNTARY RESETTLEMENT SCREENING CHECKLIST

Name of City/MC/LG: Jehlum, Muhammad Dawood MOP

Sub-Project Sector: Street Lights

Sub-Project Title: Improvement of Street Light along Thalian wala Road- Jhelum

Sub- Project Categorization: E-3 & S-3

Date of Screening: 05-10-2022

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		Central median line of circular Road used for this intervention
If yes, then describe the type of land being acquired from the categories below:		✓		No Land acquired for this sub project
Has any AED been conducted at the proposed location by the government ¹ ? Yes/No		✓		Not observed in sub project area and confirm by MC Staff also
Land (Quantify and describe types of land being acquired in “remarks column”).		✓		No Land acquired for this sub project
Government and LG owned land free of occupation (agriculture or settlement)		✓		Already road exist and land is owned by govt
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		No Land acquired for this sub project
Private land		✓		No Land acquired for this sub project
Residential		✓		No Land acquired for this sub project
Commercial		✓		No Land acquired for this sub project
Agricultural		✓		No Land acquired for this sub project
Communal		✓		No Land acquired for this sub project
Others (specify in “remarks”).		✓		Already road exist and land is owned by govt

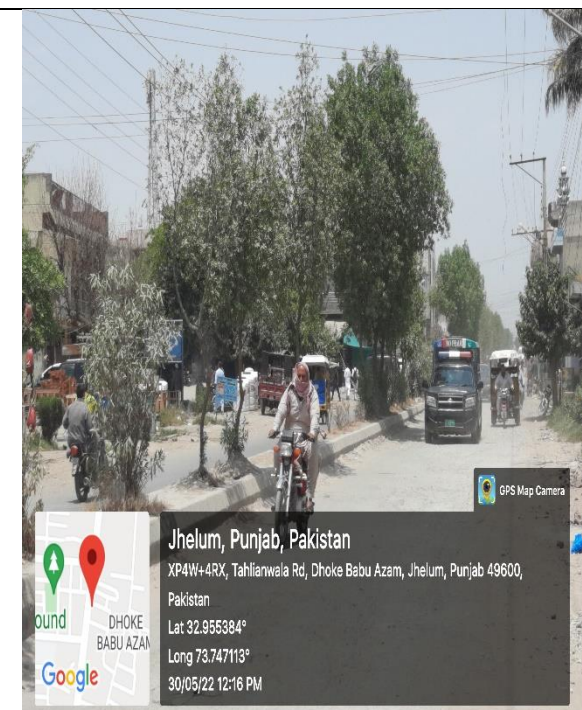
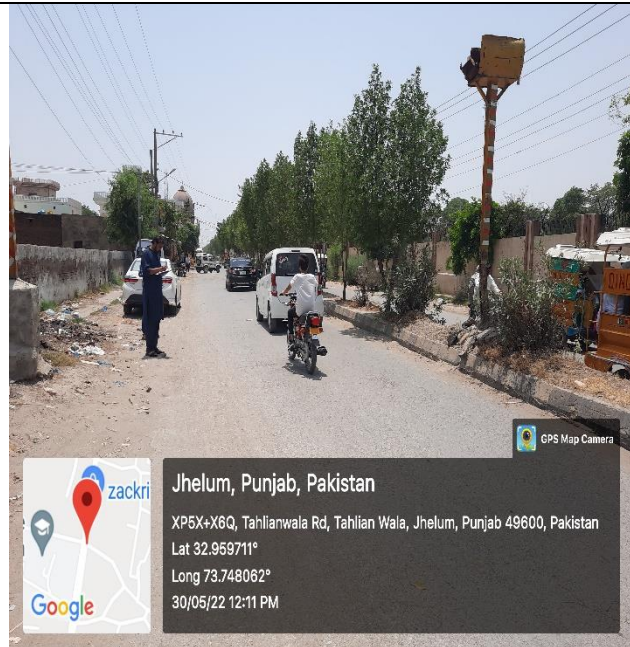
Name of owner/owners and type of ownership document if available.		✓		Already road exist and land is owned by govt
If land is being acquired, describe any structures constructed on it		✓		No Land acquired for this sub project
Land-based assets:		✓		No Land acquired for this sub project
Residential structures		✓		No Land acquired for this sub project
Commercial structures (specify in “remarks”)		✓		No Land acquired for this sub project
Community structures (specify in “remarks”)		✓		No Land acquired for this sub project
Agriculture structures (specify in “remarks”)		✓		

Public utilities (specify in “remarks”)	✓			Already road exist and land is owned by Govt.
Others (specify in “remarks”)		✓		No Land acquired for this sub project
If agricultural land is being acquired, specify the following:		✓		No Land acquired for this sub project
Agriculture related impacts		✓		No Land acquired for this sub project
Crops and vegetables (specify types and cropping area in “remarks”).		✓		No Land acquired for this sub project
Trees (specify number and types in “remarks”).		✓		No Land acquired for this sub project
Others (specify in “remarks”).		✓		No Land acquired for this sub project
Affected Persons (APs)		✓		No Persons Affected during this Project
Will any people be displaced from the land when acquired? Yes/No		✓		No Land acquired for this sub project
Number of APs		✓		No Persons Affected during this Project
Males		✓		No Persons Affected during this Project
Females		✓		No Persons Affected during this Project
Titled landowners		✓		No Land acquired for this sub project
Tenants and sharecroppers		✓		No Land acquired for this sub project
Leaseholders		✓		No Land acquired for this sub project
Agriculture wage laborers		✓		Not involved in this project

Encroachers and squatters (specify in remarks column)		✓		No Land acquired for this sub project
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons, and those below the poverty line). Specify the number and vulnerability in “remarks”.		✓		Not involved in this project
Others (specify in “remarks”)		✓		Not involved in this project
How will people be affected?		✓		No Persons Affected during this Project

Prepared By: Name: Muhammad Imran Designation: Env Specialist Signature	Reviewed By: Name: Tehmina Kiran Designation: PO ESM-PMDFC Signature	Endorsed By: Name: Muhmmad Ahmad Designation: MOI&S Signature
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Pictures of Project Siting



INVOLUNTARY RESETTLEMENT SCREENING CHECKLIST

Name of City/MC/LG: JHELUM

Sub-Project Sector: Roads & Street Lights

Sub-Project Title: Improvement of Street Light along Jida Road Jhelum

Sub- Project Categorization: E-3 & S-3

Date of Screening: 22-06-2022

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		Central median line of circular Road used for this intervention
If yes, then describe the type of land being acquired from the categories below:		✓		No Land acquired for this sub project
Has any AED been conducted at the proposed location by the government ¹ ? Yes/No		✓		Not observed in sub project area and confirm by MC Staff also
Land (Quantify and describe types of land being acquired in “remarks column”).		✓		No Land acquired for this sub project
Government and LG owned land free of occupation (agriculture or settlement)		✓		Already road exist and land is owned by govt
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		No Land acquired for this sub project
Private land		✓		No Land acquired for this sub project
Residential		✓		No Land acquired for this sub project
Commercial		✓		No Land acquired for this sub project
Agricultural		✓		No Land acquired for this sub project
Communal		✓		No Land acquired for this sub project
Others (specify in “remarks”).		✓		Already road exist and land is owned by govt
Name of owner/owners and type of ownership document if available.		✓		Already road exist and land is owned by govt

If land is being acquired, describe any structures constructed on it		✓		No Land acquired for this sub project
Land-based assets:		✓		No Land acquired for this sub project
Residential structures		✓		No Land acquired for this sub project
Commercial structures (specify in “remarks”)		✓		No Land acquired for this sub project
Community structures (specify in “remarks”)		✓		No Land acquired for this sub project
Agriculture structures (specify in “remarks”)		✓		

Public utilities (specify in “remarks”)	✓			Already road exist and land is owned by Govt.
Others (specify in “remarks”)		✓		No Land acquired for this sub project
If agricultural land is being acquired, specify the following:		✓		No Land acquired for this sub project
Agriculture related impacts		✓		No Land acquired for this sub project
Crops and vegetables (specify types and cropping area in “remarks”).		✓		No Land acquired for this sub project
Trees (specify number and types in “remarks”).		✓		No Land acquired for this sub project
Others (specify in “remarks”).		✓		No Land acquired for this sub project
Affected Persons (APs)		✓		No Persons Affected during this Project
Will any people be displaced from the land when acquired? Yes/No		✓		No Land acquired for this sub project
Number of APs		✓		No Persons Affected during this Project
Males		✓		No Persons Affected during this Project
Females		✓		No Persons Affected during this Project
Titled landowners		✓		No Land acquired for this sub project
Tenants and sharecroppers		✓		No Land acquired for this sub project
Leaseholders		✓		No Land acquired for this sub project
Agriculture wage laborers		✓		Not involved in this project
Encroachers and squatters (specify in remarks column)		✓		No Land acquired for this sub project

Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons, and those below the poverty line). Specify the number and vulnerability in “remarks”.		✓		Not involved in this project
Others (specify in “remarks”)		✓		Not involved in this project
How will people be affected?		✓		No Persons Affected during this Project

INVOLUNTARY RESETTLEMENT SCREENING CHECKLIST

Name of City/MC/LG: JHELUM

Sub-Project Sector: Roads & Street Lights

Sub-Project Title: Improvement of Street Light along Thalian wala Road, jhelum

Sub- Project Categorization: E-3 & S-3

Date of Screening: 22-06-2022

SECTION 1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		Central median line of circular Road used for this intervention
If yes, then describe the type of land being acquired from the categories below:		✓		No Land acquired for this sub project
Has any AED been conducted at the proposed location by the government ¹ ? Yes/No		✓		Not observed in sub project area and confirm by MC Staff also
Land (Quantify and describe types of land being acquired in “remarks column”.		✓		No Land acquired for this sub project
Government and LG owned land free of occupation (agriculture or settlement)		✓		Already road exist and land is owned by govt
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		No Land acquired for this sub project
Private land		✓		No Land acquired for this sub project
Residential		✓		No Land acquired for this sub project
Commercial		✓		No Land acquired for this sub project
Agricultural		✓		No Land acquired for this sub project
Communal		✓		No Land acquired for this sub project
Others (specify in “remarks”).		✓		Already road exist and land is owned by govt
Name of owner/owners and type of ownership document if available.		✓		Already road exist and land is owned by govt
If land is being acquired, describe any structures constructed on it		✓		No Land acquired for this sub project

Land-based assets:		✓		No Land acquired for this sub project
Residential structures		✓		No Land acquired for this sub project
Commercial structures (specify in “remarks”)		✓		No Land acquired for this sub project
Community structures (specify in “remarks”)		✓		No Land acquired for this sub project
Agriculture structures (specify in “remarks”)		✓		

Public utilities (specify in “remarks”)	✓			Already road exist and land is owned by govt
Others (specify in “remarks”)		✓		No Land acquired for this sub project
If agricultural land is being acquired, specify the following:		✓		No Land acquired for this sub project
Agriculture related impacts		✓		No Land acquired for this sub project
Crops and vegetables (specify types and cropping area in “remarks”).		✓		No Land acquired for this sub project
Trees (specify number and types in “remarks”).		✓		No Land acquired for this sub project
Others (specify in “remarks”).		✓		No Land acquired for this sub project
Affected Persons (APs)		✓		No Persons Affected during this Project
Will any people be displaced from the land when acquired? Yes/No		✓		No Land acquired for this sub project
Number of APs		✓		No Persons Affected during this Project
Males		✓		No Persons Affected during this Project
Females		✓		No Persons Affected during this Project
Titled landowners		✓		No Land acquired for this sub project
Tenants and sharecroppers		✓		No Land acquired for this sub project
Leaseholders		✓		No Land acquired for this sub project
Agriculture wage laborers		✓		Not involved in this project
Encroachers and squatters (specify in remarks column)		✓		No Land acquired for this sub project

Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons, and those below the poverty line). Specify the number and vulnerability in “remarks”.		✓		Not involved in this project
Others (specify in “remarks”)		✓		Not involved in this project
How will people be affected?		✓		No Persons Affected during this Project

Prepared By:

Name: Muhammad Imran

Signature:

Date:20-10-2022

Endorsed By:

Name: Miss Tahmina Kiran

Signature:

Date:20-10-2022

PUNJAB CITIES PROGRAM

ENVIRONMENT, HEALTH AND SAFETY SOPs FOR LABOR/WORKERS

Labor /workers play key role in the infrastructure development and construction activities. The objective of preparation of the EHS SOPs for Labor/Workers is to address environment, health and safety issues related to the proposed sub-project implementation. These SOPs will provide guidelines to be followed by the contractors for effective management of EHS issues related to labor/workers/daily wagers (including women). These SOPs will be annexed in the general conditions of all the contracts carried out under the PCP. These SOPs are designed for Punjab Cities Program and will be applicable to all types of labor/workers/daily wagers (including women), hired for the construction activities under PCP. Following are the anticipated Environment, Health and Safety issues and their recommended mitigation measures.

Table 1: Construction Camp Management

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
Siting and Location of construction camps	<p>Camp sites for construction workers are the important locations that have significant impacts such as health and safety hazards on labor/workers</p> <p>Lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities will increase pressure on the local services and generate substandard living standards and health hazards.</p>	<p>The Contractor shall:</p> <p>Locate the construction camps at areas which are acceptable from environmental, cultural or social point of view.</p> <p>Consider the location of construction camps away from communities in order to avoid social conflict with the surrounding communities.</p> <p>Submit to the relevant MC for approval of a detailed layout plan for the development of the construction camp showing the relative locations of all temporary buildings and facilities that are to be constructed together with the location of site roads, fuel storage areas (for use in power supply generators), solid waste management and dumping locations, and drainage facilities, prior to the development of the construction camps.</p> <p>Local authorities responsible for health, religious and security shall be duly informed on the set up of camp facilities so as to maintain effective surveillance over public health, social and security matters</p>
Construction Camp Facilities	<p>Lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities will generate social issues and impacts on health and environment.</p>	<p>Contractor shall provide the following facilities in the campsites:</p> <p>Adequate ventilation facilities</p> <p>Safe and reliable drinking water supply for personal hygiene (washing or bathing)</p> <p>Adequate housing for all workers</p> <p>Safe and reliable drinking water supply. Water supply from tube wells that meets the Punjab Environment Quality Standards</p> <p>Hygienic sanitary facilities, hand washing facilities and sewerage system.</p> <p>The toilets and domestic waste water will be collected</p>
Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines

		<p>through a common sewerage.</p> <p>Provide separate latrines and bathing places for males and females with total isolation by wall or by location. Female toilets should be clearly marked in language or signage clearly understood by the persons using them to avoid miscommunication. The minimum number of toilet facilities required is one toilet for every ten persons.</p> <p>Storm water drainage facilities. Both sides of roads are to be provided with shallow v drains to drain off storm water to a silt retention pond which shall be sized to provide a minimum of 20 minutes retention of storm water flow from the whole site. Channel all discharge from the silt retention pond to natural drainage via a grassed swale at least 20 meters in length with suitable longitudinal gradient.</p> <p>Paved internal roads. Ensure with grass/vegetation coverage to be made of the use of top soil that there is no dust generation from the loose/exposed sandy surface. Pave the internal roads of at least haring-bond bricks to suppress dusts and to work against possible muddy surface during monsoon.</p> <p>Provide child crèches for women working on the construction site. The crèche should have facilities for dormitory, kitchen, indoor/outdoor play area. Schools should be attached to these crèches so that children are not deprived of education whose mothers are construction workers. Provide in-house community/common entertainment facilities. Dependence of local entertainment outlets by construction camps to be discouraged/prohibited to the extent possible.</p>
Disposal of Labor Camp waste	Management of wastes is crucial to minimize impacts on the environment as well as on the health of the workers/labor	<p>The Contractor shall:</p> <p>Ensure proper collection and disposal of solid wastes within the construction camps</p> <p>Insist waste separation by source; organic wastes in one pot and inorganic wastes in another pot at household level.</p> <p>Store inorganic wastes in a safe place within the household and clear organic wastes on daily basis to waste collector. Establish waste collection, transportation and disposal systems at their own.</p> <p>Dispose organic wastes in a designated safe place on daily basis. At the end of the day cover the organic wastes with a thin layer of sand so that flies, mosquitoes, dogs, cats, rats, are not attracted. One may dig a large hole to put organic wastes in it; take care to protect groundwater from contamination by leachate formed due to decomposition. Cover the bed of the pit with impervious layer of materials (clayey, thin concrete) to protect groundwater from contamination.</p>

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
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		<p>Locate the garbage pit/waste disposal site min 500 m away from the residence so that peoples are not disturbed with the odor likely to be produced from anaerobic decomposition of wastes at the waste dumping places. Encompass the waste dumping place by fencing and tree plantation to prevent children to enter and play with.</p> <p>All solid waste will be collected and removed from the work camps and disposed in approval waste disposal sites.</p>
Fuel supplies for cooking purposes	Illegal sourcing of fuel wood by construction workers will impact the natural flora and fauna	<p>The Contractor shall:</p> <p>Provide fuel to the construction camps for their domestic purpose, in order to discourage them to use fuel wood or other biomass.</p> <p>Make available alternative fuels like natural gas or kerosene on ration to the workforce to prevent them using biomass for cooking.</p> <p>Conduct awareness campaigns to educate workers on preserving the protecting of biodiversity in the project area, and relevant government regulations and punishments on wildlife protection.</p>
Health and Hygiene	There will be a potential for diseases to be transmitted including COVID-19, malaria, exacerbated by inadequate health and safety practices. There will be an increased risk of work crews spreading sexually transmitted infections and HIV/AIDS.	<p>The Contractor shall:</p> <p>Provide adequate health care facilities within construction sites.</p> <p>Provide first aid box facility at the construction site round the clock. Maintain stock of medicines in the first aid facility in camp sites facility and appoint fulltime designated first aider or nurse.</p> <p>Provide ambulance facility for the laborers during emergency to be transported to nearest hospitals and telephone/mobile facility to call for Emergency Services 1122.</p> <p>Initial health screening of the laborers coming from outside areas</p> <p>Train all construction workers in basic sanitation and health care issues and safety matters, and on the specific hazards of their work</p> <p>Provide HIV awareness programming, including STI (sexually transmitted infections) and HIV information, education and communication for all workers on regular basis</p> <p>Provide adequate drainage facilities throughout camps to ensure that disease vectors habitats (stagnant water bodies, puddles) do not form.</p> <p>Regular mosquito repellent sprays in monsoon.</p> <p>Carryout short training sessions on best hygiene practices to</p>

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		<p>be mandatorily participated by all workers.</p> <p>Place display boards at strategic locations within the camps containing messages on best hygienic practices</p> <p>Place display boards of contact information of nearest dispensary/health clinic/hospital</p>

Safety	In adequate safety facilities to the construction camps may create security problems and fire hazards	<p>The Contractor shall:</p> <p>Provide appropriate security personnel (police / home guard or private security guards) and enclosures to prevent unauthorized entry in to the camp area.</p> <p>Maintain register to keep track on a head count of persons present in the camp at any given time.</p> <p>Encourage use of flame proof material for the construction of labor housing/site office. Ensure that these houses/rooms are of sound construction and capable of withstanding storms/cyclones.</p> <p>Provide appropriate type of firefighting equipment suitable for the construction camps</p> <p>Display emergency contact numbers clearly and prominently at strategic places in camps.</p> <p>Communicate the roles and responsibilities of laborers in case of emergency in the monthly meetings with contractor.</p>
Food Safety	There is potential for exposure to poisonous substances by ingestion	Suitable arrangements are to be made for provision of clean eating areas where workers are not exposed to the hazardous or noxious substances
Site Restoration	Restoration of the construction camps to original condition requires demolition of construction camps.	<p>The Contractor shall:</p> <p>Dismantle and remove from the site all facilities established within the construction camp including the perimeter fence and lockable gates at the completion of the construction work.</p> <p>Dismantle camps in phases as the work decreases (do not wait for completion of the entire work.</p> <p>Give prior notice to the laborers before demolishing their camps/units</p> <p>Maintain the noise levels within the national standards during demolition activities</p> <p>Different contractors should be hired to demolish different structures to promote recycling or reuse of demolished material.</p> <p>Reuse the demolition debris to a maximum extent. Dispose remaining debris at the designated waste disposal site by MCs/ESFPs.</p> <p>Handover the construction camps with all built facilities as it is if agreement between both parties (contractor and landowner) has been made so.</p>
Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		<p>Restore the site to its original condition or to an agreed condition with the landowner defined prior to the commencement of the works (in writing).</p> <p>Not make false promises to the laborers for future employment in O&M of the project.</p>

Table 2: Cultural and Religious Issues

Activity/ Impact Source	Environmental Impacts	Mitigation Measures/ Management Guidelines
Construction activities	Disturbance in performance of religious activities	<p>The Contractor shall:</p> <p>Provide separate prayer facilities (men and women) to the construction workers.</p> <p>Show appropriate and non-biased behavior with all construction workers irrespective of their religious or cultural affinities</p> <p>Allow the workers to participate in praying during construction time</p> <p>Inform the local authorities responsible for health, religious and security duly informed before commencement of civil works so as to maintain effective surveillance over public health, social and security matters</p> <p>In case of working during COVID-19 pandemic, SOPs for prayers in Mosque issued by the Government of Punjab, will be applicable and it will be responsibility of contractor to sensitize the labor/workers about it</p>

Table 3: Workers/Labor Health and Safety at Construction Site

Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
Construction Activities	Construction works may pose health and safety risks to the construction workers and site visitors leading to severe injuries and deaths. The population in the proximity of the construction site and the construction workers will be exposed to a number of (i) biophysical health risk factors, (e.g. noise,	<p>The Contractor shall:</p> <p>Implement suitable safety standards for all workers and site visitors which should not be less than those laid down on the international standards (e.g. International Labor Office guideline on ‘Safety and Health in Construction; World Bank Group’s ‘Environmental Health and Safety Guidelines’) and contractor’s own national standards or statutory regulations, in addition to complying with the national acts and rules of the Government of Pakistan Provide the workers with a safe and healthy work environment, taking into account inherent risks in its particular construction activity and specific classes of</p>
Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines

	dust, chemicals, construction material, solid waste, waste water, vector transmitted diseases etc), (ii) risk factors resulting from human behavior (e.g. STD, HIV etc) and (iii) road accidents from construction traffic.	<p>hazards in the work areas,</p> <p>Provide Personal Protection Equipment (PPEs)¹ for workers, such as safety boots, helmets, masks, gloves, protective clothing, goggles, full-face eye shields, and ear protection. Maintain the PPE properly by cleaning dirty ones and replacing them with the damaged ones.</p> <p>Safety procedures include provision of information, training and protective clothing to workers involved in hazardous operations and proper performance of their job</p> <p>Appoint an environment, health and safety manager to look after the health and safety of the workers</p> <p>Inform the local authorities responsible for health, religious and security before commencement of civil works and establishment of construction camps so as to maintain effective surveillance over public health, social and security matters</p>
	Child and pregnant labor	The Contractor shall: not hire children of less than 14 years of age and pregnant women or women who delivered a child within 8 preceding weeks, in accordance with the Employment of Children Act (2015) ² and Pakistani Labor Laws and policies respectively .

1 Table 4 presents general examples of occupational hazards and types of PPE available for different purposes.

2 The ECA 2015 defines a child as a person who has not completed his/her 14th year of age. The ECA states that no child shall be employed or permitted to work in any of the occupations set forth in the ECA (such as transport sector, railways, construction, and ports) or in any workshop wherein any of the processes defined in the Act is carried out

Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
Accidents	Lack of first aid facilities and health care facilities in the immediate vicinity will aggravate the health conditions of the victims	<p>Provide health care facilities and first aid facilities are readily available. Appropriately equipped first-aid stations should be easily accessible throughout the place of work Document and report occupational accidents, diseases, and incidents.</p> <p>Prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, so far as reasonably practicable, the causes of hazards. In a manner consistent with good international industry practice.</p> <p>Identify potential hazards to workers, particularly those that may be life-threatening and provide necessary preventive and protective measures.</p> <p>Provide awareness to the construction drivers to strictly follow the driving rules</p> <p>Provide adequate lighting in the construction area and along the roads</p>

Water and sanitation facilities at the construction sites	Lack of Water sanitation facilities at construction sites cause inconvenience to the construction workers and affect their personal hygiene.	The contractor shall provide separate portable toilets and hand washing facilities at the construction sites, if about 25 people are working the whole day for a month. Location of portable facilities should be at least six m away from storm drain system and surface waters. These portable toilets should be cleaned once a day and all the sewerage should be pumped from the collection tank once a day and should be brought to the common septic tank for further treatment. Contractor should provide bottled drinking water facilities to the construction workers at all the construction sites.
Other issues	Potential risks on health and hygiene of construction workers and general public	The Contractor shall follow the following management measures to reduce health risks to the construction workers and nearby community: Drainage Management Air Quality Management Noise and Vibration Management Road Transport and Road Traffic Management
Trainings	Lack of awareness and basic knowledge in health care among the construction workforce, make them susceptible to potential diseases.	The Contractor shall: Train all construction workers in basic sanitation and health care issues (e.g., how to avoid COVID-19, malaria and transmission of sexually transmitted infections (STI) HIV/AIDS. Train all construction workers in general health and safety matters, and on the specific hazards of their work Training should consist of basic hazard awareness, site specific

3 .SOPs issued by the GoPunjab during COVID-19 Pandemic will be implemented

Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
		<p>hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate.</p> <p>Commence the COVID-19, malaria, HIV/AIDS and STI education campaign before the start of the construction phase and complement it with by a strong condom marketing, increased access to condoms in the area as well as to voluntary counseling and testing.</p> <p>Implement COVID-19, malaria, HIV/AIDS and STI education campaign targeting all workers hired, international and national, female and male, skilled, semi- and unskilled occupations, at the time of recruitment and thereafter pursued throughout the construction phase on ongoing and regular basis. This should be complemented by easy access to condoms at the workplace as well as to voluntary counseling and testing.</p>

Table 4: Summary of Recommended Personal Protective Equipment According to Hazard¹⁷

Objective	Workplace Hazards	Suggested PPE
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc.
Head protection	Falling objects, inadequate height clearance, and overhead power cords.	Plastic Helmets with top and side impact protection.
Hearing protection	Noise, ultra-sound.	Hearing protectors (ear plugs or ear muffs).
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.
Hand protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.
Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multigas personal monitors, if available.
	Oxygen deficiency	Portable or supplied air (fixed lines). On-site rescue equipment.
Body/leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration.	Insulating clothing, body suits, aprons etc. of appropriate materials.

¹⁷ Source: IFC Environmental, Health, and Safety (EHS) Guidelines