Local Government & Community Development Department

Punjab Cities Program
Improvement and Rehabilitation of P1-Gojra Toba Road in Gojra City

PC-I

Estimated Cost PKR 291.705 Million

March 2023

Municipal Committee Gojra

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Punjab Cities Program

PC-I Form for Improvement of P1-Gojra Toba Road Project in Gojra City

Table of contents

PC-I FORM
for
Improvement & Rehabilitation of P1-Gojra Toba Road Project in Gojra City

Project Serial Number

Sector : ***Local Government & Community Development Department***
Sub Sector: ***Social***

<table>
<tr><td>1. Name of the project</td><td>Punjab Cities Program
Improvement & Rehabilitation of P1-Gojra Toba Road Project in Gojra city</td></tr>
<tr><td>2.Location</td><td>Gojra was given the status of a Tehsil Headquarter and affiliated with newly established district Toba Tek Singh in 1982.The town of Gojra is located at 72°-41’ East and 31°-9' North. The city is located at 50 km from Faisalabad, 170 km from Lahore and 32 km north of Toba Tek Singh. Location map of the city is attached in Annexure-A</td></tr>
<tr><td colspan="2">3. Authorities responsible for</td></tr>
<tr><td>i- Sponsoring</td><td>Government of the Punjab (through World Bank funding)</td></tr>
<tr><td>ii- Execution</td><td>Municipal Committee Gojra</td></tr>
<tr><td>iii- Operation and Maintenance</td><td>Municipal Committee Gojra</td></tr>
<tr><td>iv-Concerned Provincial Department</td><td>Local Government and Community Development Department Punjab</td></tr>
<tr><td>4a.Plan Provision</td><td></td></tr>
<tr><td>i. If the project is included in medium term/five year plan, specify actual allocation</td><td>Punjab Cities Program (PCP) is a World Bank funded Program with a total cost of USD 236.00 million and comprises of below mentioned components.

<table><tr><td>Total loan from World Bank</td><td>USD 200.00 million</td></tr><tr><td>Component-1 Infrastructure development (PforR)</td><td>USD 180.00 million USD</td></tr><tr><td>Component-2 Technical Assistance</td><td>USD 20.00 million</td></tr><tr><td>MCs share (20% of PforR component) equivalent to:</td><td>USD 36.00 million</td></tr><tr><td>Total Program cost</td><td>USD 236.00 million</td></tr></table>
Component-1 i-e Infra Structure Development component of Program costing USD 180.00 million is meant for management cost of the Program and capacity building of Municipal Units & Government Departments and</td></tr>
</table>

		is included in the medium term/ five-year plan and has been funded now in ADP 2022-23 - under General Serial No-1769 with allocation of PKR 1329.90 million as foreign component.
ii- If not included in the current plan, what warrants its inclusion and how it is now proposed to be accommodated		Not applicable
iii If the project is proposed to be financed out of block provision indicate.		The Project is being financed by World Bank as Donor along with 20% co-financing from the Program Units and is not proposed to be financed out of block allocation.
4b- Provision in the current year PSDP/ADP		PKR.1329.90 million under ADP 2022-23 General Serial No 1769 for Component-1 of the Program i-e Infra Structure Development as described above.
5. Project objectives and its relationship with sector objectives		**Sector Objectives** The sector objectives include: 1. Provision of efficient and effective municipality services to the masses. 2. Community development through improving basic infrastructure. 3. Clean and green environment for better living standards. 4. Effective use of land through master planning of urban areas. 5. Social uplifting and cohesion through provision of public open spaces and play grounds. 6. Ease in mobility and communication. 7. Cost efficient Solid Waste Management through waste to energy initiatives. 8. Capacity building of Local Governments. 9. Efficient Road network to make areas easily accessible **Objectives of the Project** The Project aims at improvement of infrastructure of municipal services such as roads, chowks, cross roads, street lights, parks and parking shed for SWM machinery for improved communication and recreational facilities. Scope of the work for this particular project includes the rehabilitation and improvement of existing roads, chowks and drainage system along with the construction of new drainage system where needed. However, the cleaning and de-silting of existing drains and pipes will be arranged by MC Gojra from their own resources.

	The Project has the following objectives; 1. Improvement of service delivery level of the municipal services in the sector of communication. 2. Better travelling facilities for the commuters. 3. Reduction in road accidents. 4. Saving in travelling and repair cost of the vehicles. 5. Reduction in annual maintenance charges of roads and parks 6. Better lit roads and streets adding to security of people travelling at night. 7. Improvement in environments of the city making them livable. 8. Improvement in local and province economy. 9. Improvement in the economic growth potential of the city. Hence, the objectives of the project are in line with the sector objectives mentioned at Sr. No-1, 2, 3, 5 and 6 above and the project forms integral part of the concerned sector.
6. Description, justification, technical parameters and technology transfer aspects	
i. Present Condition	As per PLGA-12019 Urban Local Governments (ULGs) are basically and wholly responsible for delivery of the municipal services with a service delivery level which should satisfy the consumers and citizen. Unfortunately, the prevalent conditions of the service delivery are not encouraging in the city. The major reason of unsatisfactory service delivery is the lack of proper maintenance of the municipal infrastructure in all sectors causing consumer dissatisfaction at one end and degradation of the infrastructure on the other end apart from very low revenue recovery as the consumers are reluctant to pay because of deteriorated service delivery. The roads infrastructure has been damaged and degraded because of lack of repairs and upgradation due to shortage of money and constrained municipal budgets. If these roads & chowks are not improved at this stage, then this infrastructure will be further damaged / degraded giving financial loss to the public as well as private sectors and the growth potential of the city will be adversely affected. Damaged roads will increase the operational expenditure of the vehicles apart from wasting time and giving rise to public frustration and mental agony. The only way to keep the infrastructure in operational and functional condition for better travelling and recreational facilities to the inhabitants of the city and the surrounding areas, is to improve the roads, chowks and important cross roads

<table>
<tr><td>ii. Description of the subproject-</td><td>The project comprises of improvement of 01 Nos damaged roads with total length of 3.1 Km in the city. Detail of these roads has been given in the table below.</td></tr>
<tr><td>iii Detail of civil works, equipment & machinery and other physical facilities</td><td>The detail of roads and chowks to be improved, rehabilitated or constructed in the city, is given below
<table>
<tr><td colspan="4">Improvement and construction of roads</td></tr>
<tr><td>S. N.</td><td>Name of road</td><td>From-To</td><td>Detail of works involved</td></tr>
<tr><td>1</td><td>P1-Gojra Toba Road</td><td>MC Limit Via Railway Crossing Chowk to Gojra By Pass</td><td>• Geometric Improvement
• Rehabilitation of Existing Pavement Structure
• Pavement Marking
• Street Lighting
• Improvement of drainage system</td></tr>
</table></td></tr>
<tr><td>iv Indicate governess issues of the sector relevant to the project and strategy to resolve them</td><td>• MC Gojra is facing acute shortage of staff. The smooth sailing of the Punjab Cities Program can only be assured when the required staff is available with Unit.
• The Repair and maintenance of the municipal services is not up to the mark in such Unit. Trainings will be imparted by PMDFC to the officers as well as the field staff under the Program but practicing the interventions and method/procedures learnt in these trainings is the actual requirement in which Units are lacking at present. Hence inculcating the mind set for good repair and maintenance is the major requirement for improving the service delivery level.</td></tr>
<tr><td>7- Capital Cost of Project</td><td>The summary of the works included in the project is given below;
<table>
<tr><th>S. No</th><th>Name of road</th><th>Cost (PKR million)</th></tr>
<tr><td>1</td><td>P1-Gojra Toba Road Works</td><td>182.69</td></tr>
<tr><td>2</td><td>Stormwater Drainage System</td><td>36.61</td></tr>
<tr><td>3</td><td>Electrical Works</td><td>36.94</td></tr>
<tr><td>4</td><td>Environment And Social Mitigation Cost</td><td>1.33</td></tr>
<tr><td>5</td><td>ARAP Cost</td><td>0.54</td></tr>
<tr><td></td><td>Total</td><td>258.14</td></tr>
<tr><td>6</td><td>Contingencies @2%</td><td>5.16</td></tr>
<tr><td>7</td><td>Punjab Sales Tax @5%</td><td>12.90</td></tr>
<tr><td>8</td><td>Price Escalation @ 6%</td><td>15.48</td></tr>
<tr><td></td><td>Grand Total</td><td>291.705</td></tr>
<tr><td colspan="3">See Annexure-B for details</td></tr>
</table></td></tr>
<tr><td>i- Indicate date of estimation of the project cost</td><td>The project estimates have been framed during the month of March 2023.</td></tr>
</table>

ii- Basis of determining the estimates be provided.

The cost estimates have been framed on the basis of bill of quantities actually required at site and unit rates from the Market Rate System (MRS) issued by the Government of Punjab (District Toba Tek Singh 1st biannual of year 2023).
For items not available in the MRS, the same have been analyzed as per prevailing market rates.

iii- Provide year wise estimation of physical activities

The physical and financial requirements, year wise are included in the following table:

S. #	Name of road / chowk	Year 2022-2023
1	P1-Gojra Toba Road	100%

iv- Phasing of capital cost on the basis of each item of work.

The phasing of capital cost of the project is included in the following table:

(All figures are in million rupees)

S. #	Items of Road/chowk	Total (PKR million)	Year 2022-2023 (100%)
1	P1-Gojra Toba Road Works	182.69	182.69
2	Stormwater Drainage System	36.61	36.61
3	Electrical Works	36.94	36.94
4	Environment and Social Mitigation Cost	1.33	1.33
5	ARAP Cost	0.54	0.54
	Total	**258.14**	**258.14**
6	Contingencies @2%	5.16	5.16
7	Punjab Sales Tax @5%	12.90	12.90
8	Price Escalation @ 6%	15.48	15.48
	Grand Total	**291.705**	**291.705**

8-**Annual recurrent cost after completion of the project and source of financing**

The roads & chowks are already being repaired and maintained by MC Gojra out of its own financial resources. No additional cost will be required after completion of the improvement and upgradation of the roads and chowks, rather the repairs cost will be reduced for the initial years. However, the efficiency of the infrastructure and service delivery level will be improved after completion of the project.

9- **Demand & Supply Analysis**

i- Existing Capacity of services

Existing supply level

- Existing geometry of the roads and chowk is not well enough to sustain the smooth traffic flow. Existing pavement structure of the roads and chowk is deteriorated which needs the rehabilitation to bear the traffic loading and better riding quality.
- DC T.T Singh Unit Gojra is unable to render satisfactory service to the entire area of the city because of degraded infrastructure wherein some rehabilitation and improvement are direly needed but could not

		be able to accomplish them because of low revenue recovery and funding constraints. Very few areas are reasonably served but others are deprived of the required level of the service. This is resulting in low credibility of the municipal services and citizen dissatisfaction. Further the infrastructure has not been developed and extended keeping in pace with the growth of population mainly due to migration from rural areas to urban areas. The market prices of the materials and labor have also increased drastically during the last decade which increased the O&M cost of services. This has further degraded the situation and the service delivery level is further deteriorating.
ii- Projected Demand for 10 years		• Traffic is increasing day by day in Gojra city. Projected traffic of 1 project roads for 10 year is 44.5 million. Project roads of Unit Gojra needs to be improved to save the travel time and better riding quality. • The municipal services require radical improvement to enhance the efficiency of the service to increase service delivery to a satisfactory level. For this purpose, the existing infrastructure will have to be improved. • Many shortcomings, problems and bottlenecks have been observed in the existing infrastructure which could not be addressed by MC due to funding constraints and now have been proposed to be addressed by rehabilitation of defective and outlived components of all the municipal services infrastructure.
iii- Capacity of other similar projects being implemented in public/private sector		No other project of this nature is being implemented in public as well as private sector because of funding constrains in the Unit.
iv- Supply and Demand gaps		The nature of supply and demand gap has been explained in the preceding paras which concludes; • Existing condition of the road network is not good enough to bear the traffic load. It's causing excessive delays, increasing travel time, occurring accidents at intersections and vehicles wear and tear due to the poor condition of pavement surface. Increasing traffic load requires the improvement of existing road network and chowk. • The existing infrastructure has poor efficiency resulting in unsatisfactory service delivery level. • The O&M cost of the infrastructure services is very high because of low efficiency and high market rates while there in a large gap between the O&M expenditure and the revenue recovery. • Large subsidies are being injected by Municipal Units to the keep the services in operation • Numerous public complaints are the talk of the day.

- Unsatisfactory municipal delivery is not encouraging the city to become engines of economic growth and hence the GDP of our city is much lower than the peers in the developing world.

Hence there is a large gap between the supply and demand which is to be bridged by improvement in the infrastructure and its management.

v-Designed capacity and output of the project

1. Table showing Name of roads, From and to reaches, length, ROW, metaled width and type of pavement of each road and total length is given below:

Sr. #	Road Name	From and To	Pavement Type	ROW	Carriageway Type	Metaled Width	Length (km)
2	P1-Gojra Toba Road	MC limit to Gojra bypass	Asphalt Concrete	72ft varies	Single and Dual with Median	15 ft single varies 53 ft dual (varies)	3.1

2. Roads and chowk are designed for 10-year life.
3. These roads will carry out the 44 Million traffic cumulatively for 10 years.
4. Improvement of these roads and chowk will decrease the travel time of commuters which will ultimately improve the economy of city.

10. Financial Plan
Sources of financing

Debt

a) Indicate the local and foreign debt Loan

Below given loan for the Punjab Cities Program has been funded by World Bank for 16 PCP cities in Punjab.

Total loan to Government of Pakistan/Punjab	USD 200 million
Component-1 for Infrastructure Development	USD 180 million
Component-2 for Investment Project Financing For capacity building of MCs & three Govt. organization and program management.	USD 20 million
20% share of Municipalities is equivalent to	USD 36 million
Total funds available for Infrastructure Development	USD 216 million
This project will be funded under this financing.	

b) Equity

A. Loan/grant to MC

The amount of loan converted to grant to Gojra Unit will be **PKR. (233.36) million**. The financing of the project will be as given below:

Grant to Unit for the year 2022-2023 (80% of cost of PC-I)	PKR 233.36 million
20% Co-finance by MC (20% of the cost of PC-I)	PKR 58.34 million
Total available funds	PKR 291.70 million

	B. Project Cost PKR 291.70 million *The loan is from World Bank to Government of Pakistan/Punjab which will trickle down to Gojra Unit as grant.
c) Grants	No grant is being given by Government of Punjab out of ADP funds. The World Bank loan to Government of Pakistan/Punjab will trickle down as grant to MC Gojra from Government of Punjab.
d) Weighted cost of capital	Nil
11-Project benefits and analysis	
i.Financial: Income to the project with assumption	• The project comprises of improvement of roads, chowks and cross roads in the city. • Gojra Unit has no plan to levy user charges /toll tax on the roads as these are internal roads of city and levying of toll tax is not feasible. • However, it is an infrastructure sector project but the capital cost of the project is not intended to be recovered. The MC will meet the cost of repair and maintenance out of its own resources. The project economic analysis is given as **Annexure-C**.
ii.Social benefits to the target group	The completion of the project will result in: • Up gradation of the infrastructure. • Enhanced life of the roads and chowks. • Reduction in travelling time of the commuters. • Reduction of road accidents. • Reduction in consumption of POL resulting in saving of the foreign exchange. • Reduction in the operation and maintenance cost of the vehicles. • Improvement in the environment of the city; • Minimized public mental tension and frustration • Improved local economy • Improvement of city growth potential
iii.Environmental Impact negative/positive	Construction/Rehabilitation of Roads and Chowks and their subsequent long-term use lead to many changes in the environment. There will be some negative impacts during rehabilitation of the Roads and Chowks in the form of noise of the machinery, dismantling of the existing roads, dust pollution, nuisance caused by higher traffic, risked caused by animal intersecting routes or consequences of any crossing water courses etc. Therefore, it is recommended to develop variant solutions in order to choose the one that would be least harmful to the environment, and then to incorporate them in an Environmental and Social Management Framework. However, the impacts will be temporary and there will be no negative impacts after completion of the project, rather, positive impacts, because of improvement in environments of the city, will be observed and

<table>
<tr><td></td><td>present traffic hazards and jams will be eliminated. Hence overall positive impacts will be experienced due to execution and operation of the sub-projects.
To facilitate the selection of an optimal solution and for the inclusion of Safe Operating Procedures for Construction workers/labors; assessment indicators or an Environmental Screening Checklists have been developed which is attached as Annexure E (A) of this PC-1. The checklist focuses on Environmental Issues and social concerns and ensure that all environmental and social dimensions are adequately considered. Based on. The Environment, Health and Safety SOPs for labor/workers are provided as Annexure E (B).
E&S Screening Involuntary resettlement checklists and Environment & Social Mitigation plan will be the part of bidding documents</td></tr>
<tr><td>iv.Quantifiable project outputs</td><td>The quantifiable project out puts have been given above in Sr. No-9 (V). The social benefits to the citizen have been described at Sr. No-11(ii).</td></tr>
<tr><td>v.Unit cost analysis</td><td>The unit cost analysis is produced below;
<table><tr><td>Project capital cost</td><td>PKR 291.70 million</td></tr><tr><td>Population of the city in year 2023</td><td>276,925 persons</td></tr><tr><td>Unit capital cost per capita</td><td>PKR 1053.36</td></tr></table>
• Unit R&M cost: – The Repair & maintenance cost is already being borne by Gojra Unit and there will be no increase in this cost. Due to improvement of the infrastructure R&M cost will reduce for at least 5 years after completion of the project.</td></tr>
<tr><td>vi.Employment generation (direct and indirect)</td><td><u>Employment Analysis</u>
Direct Employment
a) Planning and Design of projects
The planning and design of the project has been entrusted to local consultants who have appointed staff and experts in road and related disciplines along with their support staff. The consultants will also appoint their staff for resident supervision of the project to verify and certify the items of works to be executed under this PC-I.

b) Execution of the Project
a) PMDFC
PMDFC has the project monitoring and supervisory role and the company has enough experts and staff to complete this assignment. PMDFC has already deployed under mentioned staff for these projects:
• Civil Engineers
• Accounts, administration and audit personnel
• Urban planners
• GIS experts</td></tr>
</table>

	• Support staff like computer operators, vehicle drivers, office boys and guards. • Procurement experts • Communication experts • Environmental and social experts • Contract management experts ***b) Consultants*** PMDFC has employed consultants for detailed design and resident supervision of the projects who will deploy their staff for execution of the project. ***c) Municipality*** Gojra Unit has regular staff like engineers, sub engineers and other administrative & accounts keeping staff which will be responsible for execution of the project and contract management. No additional staff will be needed for execution of this project ***d) Contractor*** The contractor responsible for execution of the sub project will employ skilled and un-skilled labor on this work. **Indirect Employment** Indirect employment for production of material such as cement, steel, stone metal, bitumen, bricks etc. will be generated.
vii. Impacts of delays on project cost and viability	The impact of delay in project implementation will; • Result in increased project cost due to escalation in cost of material and labor. • Delay the benefits to the target group • Result in further deterioration of the infrastructure and the service delivery level.
12-Implementation Schedule	
a) Indicate starting and completion date of the project	The project is anticipated to commence by May 2023 and to be completed by August 2023 with project implementation period of 4 months.
b) Item wise/year wise schedule in line chart	The Gantt chart has been attached at **Annexure-D**
13- Management Structure and manpower requirements	
i. Administrative arrangements for the implementation of the project	**ii. Planning & design of the project** The project has been designed by the consultants employed by PMDFC and will also carry out the resident supervision of the project. **iii. Preparation of cost estimation**

		The cost estimates have been prepared by the design consultants by actual measurements are required at site. The execution of the items of works included in these estimates /PC-I will be certified by these consultants. **iv. Execution of the project** • The project will be executed by MC Gojra and supervised by the Consultants appointed by PMDFC in resident supervision mode. The technical staff & experts in PMDFC will oversee, co-ordinate and collaborate in the project planning, design and implementation through their experts in head office located in Lahore and regional offices. The reporting of progress to LG & CDD & World bank and troubleshooting will also be responsibility of PMDFC. • MO (I&S) of the Unit has been designated as Project Manager /Engineer in Charge of the project. The supervision of the works will also be carried out by these municipal officers along with their support engineering staff. All supervisory staff is available with unit Gojra • The procurement of works and goods will be done by Procurement Committee of Gojra Unit as per PPRA Rules. **v. Verification of quantities included in PC-Is and Resident Supervision of the works by consultants** The works will be supervised by Supervision Consultants in resident supervision mode by assuring the quantity and quality of works. The consultants will verify the items of work and their quantities contained in the PC-Is and cost estimates initially and then the quantities and quality of works included in the contractor claims at the stage of payments. Payments will be made by the Unit after these contractor claims have been entered in the measurement books by the Project Manager/Engineer in Charge and pre audited as per LG Works Rules.
ii- The manpower requirements by skills during execution and operation of the project and; The job description, qualification, experience, age and salary of each post		**a) PMDFC experts and staff** For rendering assistance in implementation of infrastructure projects in 16 MCs, PMDFC has the experts and staff in the required fields. In order to facilitate the Program Units, three regional offices have been established by PMDFC at Gujranwala, Faisalabad and Multan/Khanewal. **b) Resident Supervision Consultants** The project will be supervised by consultants. The tentative staff to be employed/deployed by the consultants for the certification of quantities of works and resident supervision of the project is given below.

S #	Personnel	Nos	Qualification
1	Chief Resident Engineer/Team Leader	01	BSc;/BE in Civil engineering from HEC approved University with minimum 20 years' professional experience and 5 years' experience on similar assignment or MSC; Civil Engineering/Public Health Engineering/Environmental Engineering with Bachelor in Civil Engineering and minimum 15 years, experience, with 5 years on similar assignments on urban planning, designing and construction supervision assignment.
2	Assistant Resident Engineer	01	Bachelor Degree in Civil engineering with minimum 8 years' experience in site supervision and execution for projects of similar nature
3	Environmentalist	01	Bachelor Degree in Environmentalist/ Environmental Sciences with minimum 16 years education and 5 years' experience in site supervision and execution for projects of similar nature
4	social Safeguards /Resettlement Specialist	01	Master Degree in Sociology Sciences with minimum 18 years education and 5 years' experience in site supervision and execution for projects of similar nature
5	Site Inspectors	01	DAE in Civil with minimum 10 years' experience in site supervision for projects of similar nature

c) Contractor's Technical staff, skilled & non skilled labor

The contractors will employ the supervisory technical staff and skilled & non skilled labor for execution of works. The works will be supervised by experienced Engineers and sub engineers and the number of slots for engineers and skilled and non-skilled will depend upon the type and quantity of work and its period of completion.

d) Repair & maintenance of the project

MC has its own regular staff which has been deployed for repair and maintenance of the municipal services infrastructure. However, it has been observed that the existing staff is not adequate to repair and maintain the services in a manner which can give good service delivery. Hence it is proposed to;

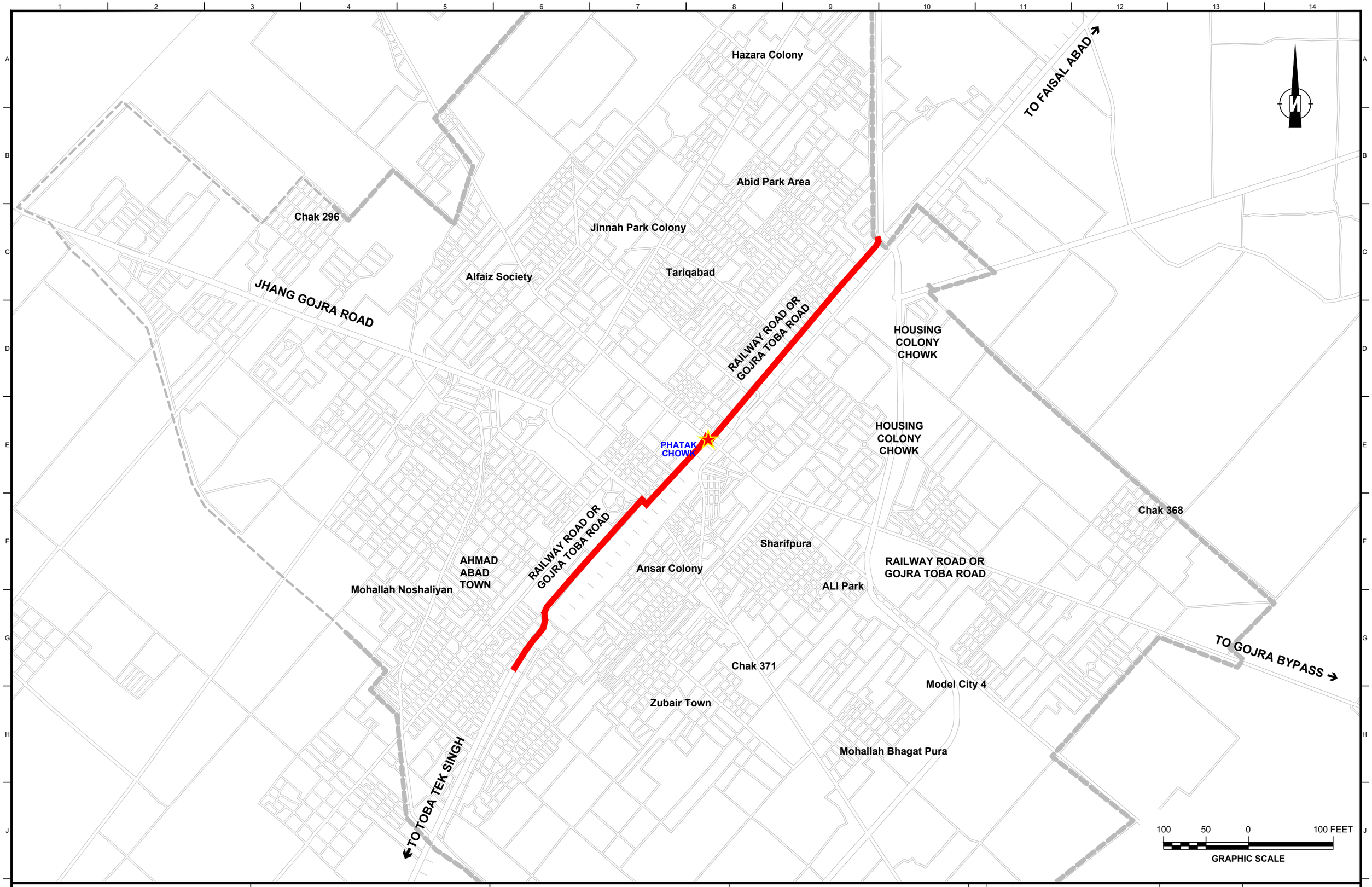
- Fill up the presently vacant slots
- Recruit additional staff as per need of the infrastructure after obtaining the sanctions from the competent authorities.

14-Additional projects /decisions required to optimize the investment being undertaken	**1) Shortage & frequent transfers of Provincially appointed staff** MC is facing shortage in provincially appointed and locally appointed cadres. This will seriously affect the pace of progress of the program and the implementation of the infrastructure projects may be delayed.

		Provincial Government should fill up the vacant staff immediately for optimizing the investments in MC. **2) Repair & Maintenance (R&M) staff** The R&M staff is also deficient and this is adversely affecting the service delivery level. Number of slots are vacant but MC is not allowed to recruit the persons to fill these slots due to ban on recruitments. Further the sanctioned strength of the field staff is much lesser than the actual requirement because with the increase in population and extension of services, additionally required staff has not been sanctioned by the competent authorities. Both of the above issues need to be addressed for optimal utilization of the investments and giving targeted benefits to the resident population of these cities.
15-Certificate		Certified that the project proposal has been prepared on the basis of guidelines provided by the Planning Commission for the preparation of PC-I for social sectors projects.

Prepared by	JERS Consultancy (Pvt) Ltd	Signatures	
Checked by	Municipal Officer (Infrastructure) Municipal Committee Gojra	Signatures	
	Chief Officer Municipal Committee Gojra	Signatures	
	Administrator Municipal Committee Gojra	Signatures	
Vetted by	Senior Program Officer PMDFC	Signatures	

Annexure-A
Location Map



CLIENT:

PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY (PMDFC)

CONSULTANTS:

JERS CONSULTANCY (PVT) LTD

24-Civic Center, Quaid-e-Azam Town, Township, Lahore (Pakistan)
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PROJECT:

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB.

DRAWING TITLE:

PROJECT KEY PLAN (GOJRA)

REV.	DATE	DESCRIPTION
-	-	-

DRAWN BY: Hassan
CHECKED BY: Umer
DATE: Feb,2023

DRAWING NO: **SV-01**
SCALE: UNIT=FEET 1"=1500'
SHEET: -
JOB NO: 488-01

Annexure-B

Cost Estimate

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

ROAD WORKS

MC GOJRA

DETAILED COST ESTIMATE

SUMMARY

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	182,696,310
2	STORMWATER DRAINAGE SYSTEM	36,619,832
3	ELECTRICAL WORKS	36,948,214
4	ENVIRONMENT AND SOCIAL MITIGATION COST	1,333,000
5	ARAP COST	548,847
	Total Amount (Rs.)	**258,146,203**
	Contingencies @ 2%	5,162,924
	PRA Charges @ 5%	12,907,310
	Price Escalation @ 6%	15,488,772
	Total Amount. Rs.	**291,705,209**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

INFRASTRUCTURE WORK

MC GOJRA

DETAILED COST ESTIMATE

SUMMARY

Sr. No.	Description	Amount (Rs.)
1	**ROAD WORKS**	
1.1	P-1 GOJRA TOBA ROAD (3.11 Km)	182,696,310
	1) Total Amount. Rs.	**182,696,310**
2	**STORMWATER DRAINAGE SYSTEM**	
2.1	P-1 GOJRA TOBA ROAD	36,619,832
	2) Total Amount. Rs.	**36,619,832**
3	**ELECTRICAL WORKS**	
3.1	P-1 GOJRA TOBA ROAD	36,948,214
	3) Total Amount. Rs.	**36,948,214**
4	**ENVIRONMENT AND SOCIAL MITIGATION COST**	**1,333,000**
5	**ARAP COST**	**548,847**
	Total Amount (Rs.) "1+2+3+4"	**258,146,203**
	Say Millions	**258.15**

ROAD WORKS

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Dismantling				
1	N.S	Dismantling / Demolishing of existing kerb stone as directed by Engineer's Incharge, Complete in all respect	Rft	400.00	27.72	11,088
2	4/46	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).	100Cft	228.90	2,960.50	677,658
		Scarifying				
3	18/11	Scarifying old road surface including removal of debris within 1 chain (30 m).	100Sft	2,315.70	462.00	1,069,853
		Excavation				
4	3/7	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-				
		i) ordinary	1000Cft	167.34	9,852.50	1,648,717
5	7/30	Supplying and filling sand under floor; or plugging in wells	100Cft	123.93	2,982.00	369,559
6	18/3 Labor Rate	Relaying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge.	1000Cft	20.60	6,035.25	124,326

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
		Sub Base Course				
7	18/3/a/ (i) + 1/1	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)	100Cft	831.72	14,979.75	12,458,958
		Road Edging				
8	18/5	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	18,966.00	54.75	1,038,389
		Water Bound Macadam				
9	18/4/a + 1/1	Providing and laying base course of crushed stone **(Water Bound Macadam)** of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)	100Cft	1,987.93	22,483.43	44,695,475
		Prime Coat				
10	18/6	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.	100Sft	3,377.95	1,968.15	6,648,312

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
11	18/7	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)	100Sft	2,620.80	1,033.85	2,709,514
		Carpeting				
		ABC				
12	18/10/a + 1/1	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iii) 4% Bitumen	Per inch thickness per 100Sft.	2,620.80	13,829.32	36,243,882
		AWC				
13	18/10/a + 1/1	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (1.5 inch thick) (iv) 4.5% Bitumen	Per inch thickness per 100Sft.	2,620.80	11,280.45	29,563,803
14	18/10/a + 1/1	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen	Per inch thickness per 100Sft.	730.90	14,747.92	10,779,255
		Paint For Traffic Lanes				
15	13/36	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.				
		ii) 6" wide	Rft	37,358.00	59.20	2,211,594
		Kerb Stone				
16	6/52/b	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.				
		b) With Painting				
		(i) 14" high	P.Rft	10,920.00	535.05	5,842,746

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
		Tuff Paver				
17	10/41	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)				
		c) 80-mm thick	Sft	111,435.50	197.40	21,997,368
		P.C.C (Between Asphalt and Tuff Paver)				
18	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	32.12	38,723.50	1,243,799
		Cat Eyes				
19	18/28	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.				
		b) Aluminium Alloy				
		(1) Dual-Directional				
		(ii) 43x2=86 Glass beads a side	Each	976.00	747.70	729,755
		(B) Uni-Directional				
		(ii) 43 Glass beads a side	Each	3,040.00	585.70	1,780,528
20	18/25/a	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.				
		(a) G.I Sheet 14 SWG				
		CIRCULAR/TRIANGULAR				
		3 ft size	P. Sft	90.00	997.20	89,748

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
21	18/27/b	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect				
		(b) 3 inch diameter	Rft	165.00	1,538.20	253,803
22	13/42/a	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	90.00	1,203.95	108,356
		For Green Belt				
23	3/32	Turfing slopes of banks or lawns with grass sods including ploughing, laying, setting and watering (Turf got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).	100Sft	238.00	1,848.00	439,824
		Deduction				
24		Kerb Stone (Input Rate)	Rft	400.00	100.00	(40,000)
		Total Amount Rs.				**182,696,310**
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.62	12,196.80	7,509

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
		Excavation				
2	3/7/i	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.	1000Cft	76.10	9,852.50	749,805
		P.C.C				
3	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100Cft	62.39	29,723.50	1,854,449
		(f) Ratio 1: 2: 4	100Cft	163.40	38,723.50	6,327,420
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	270.89	33,467.90	9,066,246
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	1.23	288.12	355
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100Sft	304.30	3,639.10	1,107,390

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
		R.C.C Work				
7	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		(3) Type C (nominal mix 1: 2: 4)	P Cft	51.00	473.85	24,166
		a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)	P Cft	9,745.00	583.25	5,683,771
		Steel				
8	6/12/c	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60	100Kg	300.01	31,944.50	9,583,785
		Gully Grating Chamber				
9	21/8	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	15.00	17,047.40	255,711

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
10	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	7.50	2,982.00	22,365
		uPVC Pipe				
11	19/47	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized polyvinyl Chloride)Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.				
		Type (SDR 41/SN-4)				
		(vii) 8"(200 mm)	Rft	300.00	455.00	136,500
		Kerb Stone				
12	6/52/b	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.				
		b) With Painting				
		(i) 14" high	P.Rft	2,926.50	535.05	1,565,824
		RPC Manhole Cover				
13	N.S	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	Each	19.00	11,844.00	225,036
		Manhole Cover				
14	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	19.00	500.00	9,500
		Total Amount (Rs)				**36,619,832**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
		ELECTRICAL WORKS				
		Scheduled Items (A)				
		Excavation				
1	3/21	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)				
		a) By Manual				
		ii) in ordinary soil.	%oCft	31.97	11,658.25	**372,714**
		RCC Foundation for Poles				
2	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	Cft	2,280.00	528.40	1,204,752
		Steel Work				
3	6/12/c	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-				
		('c) Deformed bars (Grade-60)	100Kg	57.00	31,944.50	1,820,837

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
4	24/6	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-				
		i) 50 mm i/d	Rft	11,875.00	177.75	2,110,781
5	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits /PVC pipe/G.I. wire/ trenches, etc (rate for cable only):-				
		ii) 6 mm sq (7/0.044")	Rft	1,900.00	119.20	226,480
6	24/13	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-				
		b) PVC insulated, PVC sheathed 3 core, 600/1000 volt cable:-				
		iii) 7/0.74 mm (7/0.029")	Rft	3,800.00	114.25	434,150
		c) PVC insulated, PVC sheathed 4 core, 600/1000 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	11,875.00	525.75	6,243,281
		vii) 16 mm (7/0.064")	Rft	100.00	694.80	69,480
7	24/68	Supplying, installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel ,tappered from 225 mm at bottom to 100 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.				
		a) Single Arm				
		(i) 10 mtr height	Each	41.00	116,325.30	4,769,337

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
		b) Double Arm				
		(i) 10 mtr height	Each	54.00	120,141.30	6,487,630
8	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conformimg to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/components required for proper operation , fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.				
		c) 120 Lm/Watt				
		(v) 90 Watt with 10800 Lumens	Each	149.00	52,598.60	7,837,191
9	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.				
		b) three phase, 4 wires:				
		ii) 3x50 Amp, 400 volts	Each	1.00	15,843.30	15,843
10	24/105/iii	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge				

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
		(iii) 25 KVA	Each	1.00	581,485.15	581,485
11	24/70	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	Job	98.00	10,199.15	999,517
		Sub Total Scheduled Items: (A)				**33,173,479**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

P-1 GOJRA TOBA ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Qty	Unit Rate (Rs.)	Amount (Rs.)
	Non Schedule	**Part-B**				
12	N.S	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.				
	(a)	LCP-3 Phase	No.	1.00	374,735	374,735
13	N.S	Shifting of 20 Nos. Wapda Electric Poles	Job			3,000,000
14	N.S	Electric Connection Charges	Each	1.00	400,000	400,000
		Total Cost (Part B)			**Rs.**	**3,774,735**
		Grand Total (Part A + Part B)			**Rs.**	**36,948,214**
		Grand Total Amount Rs.				**256,264,356**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

P-1 GOJRA TOBA ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Dismantling						
1	Dismantling / Demolishing of existing kerb stone as directed by Engineer's Incharge, Complete in all respect						
	Rd 0+000 to 0+200	2	200			400	Rft
					Total.	**400**	**Rft**
2	Dismantling and removing road pavement, etc., including screening and stacking of byproducts upto one chain lead (30 metre).						
	Rd 4+730 to 5+500	1	770	2.00	1	1,540	Cft
	Rd 5+500to 6+300	1	800	5.00	1	4,000	Cft
	Rd 6+300 to 7+000	1	700	2.00	1	1,400	Cft
	Rd 7+000 to 9+100	1	2,100	5.00	1	10,500	Cft
	Rd 9+100 to 10+190	1	1,090	5.00	1	5,450	Cft
					Total	22,890	Cft
					Total.	**228.90**	**%Cft**
	Scarifying						
3	Scarifying old road surface including removal of debris within 1 chain (30 m).						
	RD 0+000 to 3+400	1	3,400	14.00		47,600	Sft
	RD 3+900 to 4+523	1	623	30.00		18,690	Sft
	RD 4+730 to 5+500	1	770	51.00		39,270	Sft
	RD 5+500 to 6+300	1	800	31.00		24,800	Sft
	Rd 6+300 to 7+000	1	700	34.00		23,800	Sft
	Rd 7+000 to 9+100	1	2,100	27.00		56,700	Sft
	RD 9+100 to 10+190	1	1,090	19.00		20,710	Sft
					Total	231,570	Sft
					Total.	**2,315.70**	**%Sft**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

P-1 GOJRA TOBA ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Excavation						
4	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-						
	For Road						
	RD 0+000 to 3+400	1	3,400	2.00	1.17	7,956	Cft
	Rd 5+500 to 6+300	2	800	8.50	0.50	6,800	Cft
	Rd 7+000 to 9+100	2	2,100	10.50	0.50	22,050	Cft
	RD 9+100 to 10+190	2	1,090	14.50	0.50	15,805	Cft
	Rd 4+723 to 6+100 for existing sewer line	1	1,377	18.00	0.50	12,393	Cft
	For Tuff Paver Shoulders						
	RD 0+000 to 3+400	1	3,400	8.50	1.00	28,900	Cft
	RD 3+400 to 3+900	1	500	3.00	1.00	1,500	Cft
	RD 3+900 to 4+523	1	623	11.00	1.00	6,853	Cft
	RD 4+730 to 5+500	1	770	15.75	0.25	3,032	Cft
	RD 5+500 to 6+300	1	800	14.75	1.00	11,800	Cft
	Rd 6+300 to 7+000	1	700	3.00	1.00	2,100	Cft
	Rd 7+000 to 9+100	1	2,100	18.00	1.00	37,800	Cft
	RD 9+100 to 10+190	1	1,090	9.50	1.00	10,355	Cft
					Total	167,344	Cft
					Total.	**167.34**	**%oCft**
5	Supplying and filling sand under floor; or plugging in wells						
	Rd 4+723 to 6+100 for existing sewer line	1	1,377	18.00	0.50	12,393	Cft
					Total	12,393	Cft
					Total.	**123.93**	**%Cft**

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
6	Relaying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge.						
	90% of the Dismantle Material					20,601	
					Total	20,601	Cft
					Total.	**20.60**	**%Cft**
	Sub Base Course						
7	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)						
	For Road						
	RD 0+000 to 3+400	1	3,400	2.00	0.50	3,400	Cft
	Rd 5+500 to 6+300	2	800	8.50	0.50	6,800	Cft
	Rd 7+000 to 9+100	2	2,100	10.50	0.50	22,050	Cft
	RD 9+100 to 10+190	2	1,090	14.50	0.50	15,805	Cft
	For Tuff Paver Shoulders						
	RD 0+000 to 3+400	1	3,400	8.50	0.50	14,450	Cft
	RD 3+400 to 3+900	1	500	3.00	0.50	750	Cft
	RD 3+900 to 4+523	1	623	11.00	0.50	3,427	Cft
	RD 4+730 to 5+500	1	770	15.75	0.50	6,064	Cft
	RD 5+500 to 6+300	1	800	14.75	0.50	5,900	Cft
	Rd 6+300 to 7+000	1	700	3.00	0.50	1,050	Cft
	Rd 7+000 to 9+100	1	2,100	18.00	0.50	18,900	Cft
	RD 9+100 to 10+190	1	1,090	9.50	0.50	5,178	Cft
					Total	103,773	Cft
	D/d Dismantle Material					(20,601)	
					Total.	**831.72**	**%Cft**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

P-1 GOJRA TOBA ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Road Edging						
8	Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.						
	RD 0+000 to 3+400	2	3,400			6,800	Rft
	RD 3+900 to 4+523	2	623			1,246	Rft
	RD 4+730 to 5+500	2	770			1,540	Rft
	RD 5+500 to 6+300	2	800			1,600	Rft
	Rd 6+300 to 7+000	2	700			1,400	Rft
	Rd 7+000 to 9+100	2	2,100			4,200	Rft
	RD 9+100 to 10+190	2	1,090			2,180	Rft
					Total.	**18,966**	**Rft**
	Water Bound Macadam						
9	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Carriage Way						
	RD 0+000 to 3+400	1	3,400	16.00	0.33	17,952	Cft
	RD 3+900 to 4+523	1	623	30.00	0.42	7,850	Cft
	RD 4+730 to 5+500	2	770	24.00	0.50	18,480	Cft
	RD 5+500 to 6+300	2	800	24.00	0.50	19,200	Cft
	Rd 6+300 to 7+000	2	700	24.00	0.50	16,800	Cft
	Rd 7+000 to 9+100	2	2,100	24.00	0.50	50,400	Cft
	RD 9+100 to 10+190	2	1,090	24.00	0.67	35,054	Cft
	For Tuff Paver Shoulders						
	RD 0+000 to 3+400	1	3,400	8.50	0.33	9,537	Cft
	RD 3+400 to 3+900	1	500	3.00	0.33	495	Cft
	RD 3+900 to 4+523	1	623	11.00	0.33	2,261	Cft
	RD 4+730 to 5+500	1	770	15.75	0.33	4,002	Cft
	RD 5+500 to 6+300	1	800	14.75	0.33	3,894	Cft

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Rd 7+000 to 9+100	1	2,100	18.00	0.25	9,450	Cft
	RD 9+100 to 10+190	1	1,090	9.50	0.33	3,417	Cft
					Total	198,793	Cft
					Total.	**1,987.93**	**%Cft**
	Prime Coat						
10	Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 3+400	1	3,400	16.00		54,400	Sft
	RD 3+900 to 4+523	1	623	30.00		18,690	Sft
	RD 4+730 to 5+500	2	770	24.00		36,960	Sft
	RD 5+500 to 6+300	2	800	24.00		38,400	Sft
	Rd 6+300 to 7+000	2	700	24.00		33,600	Sft
	Rd 7+000 to 9+100	2	2,100	24.00		100,800	Sft
	RD 9+100 to 10+190	2	1,090	24.00		52,320	Sft
	Approach Roads	7	25	15.00		2,625	Sft
					Total	337,795	Sft
					Total.	**3,377.95**	**%Sft**
11	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)						
	RD 4+730 to 5+500	2	770	24.00		36,960	Sft
	RD 5+500 to 6+300	2	800	24.00		38,400	Sft
	Rd 6+300 to 7+000	2	700	24.00		33,600	Sft
	Rd 7+000 to 9+100	2	2,100	24.00		100,800	Sft
	RD 9+100 to 10+190	2	1,090	24.00		52,320	Sft
					Total	262,080	Sft
					Total.	**2,620.80**	**%Sft**
	Carpeting						
	ABC						
12	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iii) 4% Bitumen						
	RD 4+730 to 5+500	2	770	24.00		36,960	Sft
	RD 5+500 to 6+300	2	800	24.00		38,400	Sft

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Rd 6+300 to 7+000	2	700	24.00		33,600	Sft
	Rd 7+000 to 9+100	2	2,100	24.00		100,800	Sft
	RD 9+100 to 10+190	2	1,090	24.00		52,320	Sft
					Total	262,080	Sft
					Total.	**2,620.80**	**%Sft**
	AWC						
13	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (1.5 inch thick) (iv) 4.5% Bitumen						
	RD 4+730 to 5+500	2	770	24.00		36,960	Sft
	RD 5+500 to 6+300	2	800	24.00		38,400	Sft
	Rd 6+300 to 7+000	2	700	24.00		33,600	Sft
	Rd 7+000 to 9+100	2	2,100	24.00		100,800	Sft
	RD 9+100 to 10+190	2	1,090	24.00		52,320	Sft
					Total	262,080	Sft
					Total.	**2,620.80**	**%Sft**
14	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iv) 4.5% Bitumen						
	RD 0+000 to 3+400	1	3,400	16.00		54,400	Sft
	RD 3+900 to 4+523	1	623	30.00		18,690	Sft
					Total	73,090	Sft
					Total.	**730.90**	**%Sft**
	Paint For Traffic Lanes						
15	Painting Traffic Lane Marking of specified width (1.5mm thick), with Thermoplastic (TP) Paint including Glass Beads, complete in all respect, as approved and directed by Engineer incharge.						
	RD 0+000 to 3+400	2.5	3,400			8,500	Rft
	RD 3+900 to 4+523	2.5	623			1,558	Rft
	RD 4+730 to 5+500	5	770			3,850	Rft
	RD 5+500 to 6+300	5	800			4,000	Rft
	Rd 6+300 to 7+000	5	700			3,500	Rft
	Rd 7+000 to 9+100	5	2,100			10,500	Rft
	RD 9+100 to 10+190	5	1,090			5,450	Rft
					Total.	**37,358**	**Rft**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

P-1 GOJRA TOBA ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
16	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.						
	b) With Painting						
	(i) 14" high						
	RD 4+730 to 5+500	2	770			1,540	Rft
	RD 5+500 to 6+300	2	800			1,600	Rft
	Rd 6+300 to 7+000	2	700			1,400	Rft
	Rd 7+000 to 9+100	2	2,100			4,200	Rft
	RD 9+100 to 10+190	2	1,090			2,180	Rft
					Total.	**10,920**	**Rft**
	Tuff Paver						
17	Providing and laying Tuff pavers, having 7000 PSI, crushing strength of approved manufacturer, over 2" to 3" sand cushion i/c grouting with sand in joints i/c finishing to require slope. complete in all respect. (50% Grey / 50% Coloured)						
	c) 80-mm thick						
	RD 0+000 to 3+400	1	3,400	8.50		28,900	Sft
	RD 3+400 to 3+900	1	500	3.00		1,500	Sft
	RD 3+900 to 4+523	1	623	11.00		6,853	Sft
	RD 4+730 to 5+500	1	770	15.75		12,128	Sft
	RD 5+500 to 6+300	1	800	14.75		11,800	Sft
	Rd 6+300 to 7+000	1	700	3.00		2,100	Sft
	Rd 7+000 to 9+100	1	2,100	18.00		37,800	Sft
	RD 9+100 to 10+190	1	1,090	9.50		10,355	Sft
					Total.	**111,436**	**Sft**
	P.C.C (Between Asphalt and Tuff Paver)						
18	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 to 3+400	2	3,400	0.33	0.50	1,122	Cft
	RD 3+400 to 3+900	1	500	0.33	0.50	83	Cft
	RD 3+900 to 4+523	2	623	0.33	0.50	206	Cft
	RD 4+730 to 5+500	2	770	0.33	0.50	254	Cft
	RD 5+500 to 6+300	2	800	0.33	0.50	264	Cft
	Rd 6+300 to 7+000	2	700	0.33	0.50	231	Cft

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Rd 7+000 to 9+100	2	2,100	0.33	0.50	693	Cft
	RD 9+100 to 10+190	2	1,090	0.33	0.50	360	Cft
					Total	3,212	Cft
					Total.	**32.12**	**%Cft**
	Cat Eyes						
19	Providing & fixing Cat Eyes of size 4"x4"x3/4" duly casted with specified material having plastic strip containing mini retro-reflective glass beads of color white /red/ yellow having specifid reflections, quality & shape i/c the cost of self built in12mm dia x120mm long steel zinc plate dnail, fixing to road with epoxy/ hammering with separate nail complete.						
	b) Aluminium Alloy						
	(1) Dual-Directional						
	(ii) 43x2=86 Glass beads a side	976				**976**	**Each**
	(B) Uni-Directional						
	(ii) 43 Glass beads a side	3040				**3,040**	**Each**
20	Providing, fabrication and fixing pole mounted Direction Board/ road delineator of any shape and size, with specified Sheet and thickness, supported with G.I Channel, (excluding the cost of vertical post and painting) etc complete in all respect.						
	(a) G.I Sheet 14 SWG						
	CIRCULAR/TRIANGULAR						
	3 ft size	15	3.00	2.00		**90**	**Sft**
21	Providing, fabrication and fixing Vertical Post comprising of medium quality G.I Pipe of specified diameter, including the cost of clamping arrangements, top cover,hold fasts embeded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	15	11			**165**	**Rft**
22	Lettering and printing of signage /direction boards/ road delineators of any colour by machine i/c cost of Digital Lettering, Lamination & pasting etc complete in all respect.						
	a) High Intensity Prismatic (HIP) Tape					**90**	**Sft**

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	For Green Belt						
23	Turfing slopes of banks or lawns with grass sods including ploughing, laying, setting and watering (Turf got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).						
	RD 4+730 to 5+500	1	770	5.00		3,850	Sft
	RD 5+500 to 6+300	1	800	5.00		4,000	Sft
	Rd 7+000 to 9+100	1	2,100	5.00		10,500	Sft
	RD 9+100 to 10+190	1	1,090	5.00		5,450	Sft
					Total.	**238.00**	**%Sft**
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	19	8.64	0.75	0.50	61.56	Cft
					Total	**0.62**	**%Cft**
	Excavation						
2	Earthwork excavation in open cutting upto 5'-0" (1.5 m) depth for storm water channels, drains, sullage drains in open areas, roads, streets, lanes, including under pinning of walls and shoring to protect existing works, shuttering and timbering the trenches, dressed to designed level and dimensions, trimming, removal of surface water fromtrenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:- i) in ordinary soil.						
	Pipe Laying	15	20.00	1.50	2.50	1,125	Cft
	1'-6" wide drain	1	5,853	4.25	3.00	74,626	Cft
	Culverts Extension	1	22	4.00	4.00	352	Cft
					Total	76,103	Cft
					Total	**76.10**	**%oCft**
	P.C.C						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

P-1 GOJRA TOBA ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	1'-6" wide drain	1	5,853	4.25	0.25	6,219	Cft
	Culverts Extension	1	20	4.00	0.25	20	Cft
					Total	6,239	Cft
					Total	**62.39**	**%Cft**
	(f) Ratio 1: 2: 4						
	1'-6" wide drain	1	5,853	4.25	0.50	12,438	Cft
	Benching	1	5,853	1.50	0.25	2,195	Cft
	Topping	2	5,853	0.75	0.17	1,463	Cft
	Pipe Laying	15	10	0.75	1.50	169	Cft
	For manhole neck	19	8.64	0.75	0.50	62	Cft
	Culverts Extension	1	20	2.50	0.25	13	Cft
					Total	16,340	Cft
					Total	**163.40**	**%Cft**
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	1'-6" wide drain	1	5,853	1.125	2.00	13,169	Cft
		1	5,853	0.75	2.00	8,780	Cft
	For manhole neck	19	8.64	0.75	1.00	123	Cft
	RD 0+000 to 3+900	2	3,900	0.75	0.50	2,925	Cft
	RD 4+600 to 6+300	2	1,700	0.75	0.50	1,275	Cft
	RD 9+100 to 10+190	2	1,090	0.75	0.50	818	Cft
					Total	27,089	Cft
					Total	**270.89**	**%Cft**
5	Extra for pacca brick work in steining of wells or any other circular masonry.				**Total**	**1.23**	**%Cft**
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	1'-6" wide drain	1	5,853		4.00	23,412	Sft
	For manhole neck (19 x 2 = 38)	38	8.64		1.00	328	Sft
	RD 0+000 to 3+900	2	3,900		0.50	3,900	Sft
	RD 4+600 to 6+300	2	1,700		0.50	1,700	Sft
	RD 9+100 to 10+190	2	1,090		0.50	1,090	Sft
					Total	30,430	Sft
					Total	**304.30**	**%Sft**

PUNJAB CITIES PROGRAM (PCP)
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P-1 GOJRA TOBA ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	R.C.C Work						
7	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	(3) Type C (nominal mix 1: 2: 4)	1	20	3.84	0.67	51.00	Cft
					Total	**51.00**	**Cft**
	a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)						
	1'-6" wide drain	0.4	5,853	3.50	0.67	5,490.00	Cft
	Wall	2	20	0.67	2.50	67.00	Cft
	Top Slab	1	20	3.84	0.67	51.00	Cft
	RD 0+000 to 3+900	0.25	3,900	3.75	0.67	2,450.00	Cft
	RD 4+600 to 6+300	0.25	1,700	4.00	0.67	1,139.00	Cft
	RD 9+100 to 10+190	0.25	1,090	3.00	0.67	548.00	Cft
					Total	**9,745.00**	**Cft**
	Steel						
8	Fabrication of mild steel reinforcement for cement concrete, i/c cutting, bending, laying in position, making joints and fastening, i/c cost of bending wire and labour charges for bending of steel reinforcement (also includes removal of rust from deformed bars) Gade 60						
	Concrete Qty		9,796	Cft @	6.75	66,123	lbs/cft

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
						30,001	kg
					Total	**300.01**	**Kg**
	Gully Grating Chamber						
9	Constructing standard gully grating chamber, 3'x2½' (900x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	15				**15.00**	**Each**
10	Supplying and filling sand under floor; or plugging in wells.	15	20.00	2.50	1.00	**7.50**	**%Cft**
	uPVC Pipe						
11	Providing, fixing, testing and commissioning of µ-PVC (Unplasticized polyvinyl Chloride)Nikasi /waste pipe make of dadex / Popular / Beta/ BBJ plain / socket ended conforming to code EN-1401 of specified SDR (Standard Dimension Ratio) including the cost of specials and Solvents complete in all respect as approved and directed by the Engineer Incharge.						
	Type (SDR 41/SN-4)						
	(vii) 8"(200 mm)	15	20.00			**300**	**Rft**
	Kerb Stone						
12	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embeded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.						
	b) With Painting	0.5	5,853			**2,927**	**Rft**
	RPC Manhole Cover						
13	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	19				**19**	**Each**

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	ELECTRICAL WORKS						
	Scheduled Items (A)						
	Excavation						
1	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead upto one chain (30 m) and lift upto 5 ft. (1.5 m)						
	a) By Manual						
	ii) in ordinary soil.						
	For pipe 50mm dia from TR to LCP and LCP to poles	1	11,875	1.00	2.50	29,688	Cft
	Light Poles	95	2.00	2.00	6.00	2,280	Cft
					Total	31,968	Cft
					Total	**31.97**	**%oCft**
	RCC Foundation for Poles						
2	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	(2) Type B (nominal mix 1: 1½: 3)						
	Light Poles	95	2.00	2.00	6.00	2,280	Cft
					Total	**2,280.00**	**Cft**
	Steel Work						
3	Fabrication of mild steel reinforcement for cement concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-						
	('c) Deformed bars (Grade-60)	2.50Kg/Cft				**5,700**	**Kg**

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total	**57.00**	**Kg**
4	Supply and erection PVC pipe for recessed wiring (main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-						
	i) 50 mm i/d						
	From LCP to Pole and pole to pole (Up + Down)	95	125.00			**11,875**	**Rft**
5	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-						
	ii) 6 mm sq (7/0.044")						
	For two nos. Earthing lead	95	20.00			**1,900**	**Rft**
6	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-						
	b) PVC insulated, PVC sheathed 3 core, 660/1100 volt cable:-						
	iii) 7/0.74 mm (7/0.029")						
	From Terminal Box to light fixture on pole (P+N+E)	95	40.00			**3,800**	**Rft**
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	95	125.00			**11,875**	**Rft**
	vii) 16 mm (7/0.064")	1	100.00			**100**	**Rft**
7	Supplying,installation testing and commissioning of Octagonal shape electric street light pole, made of hot dipped 4.5 mm thick (7 SWG) galvanized steel ,tappered from 225 mm at bottom to 100 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 470x470x20 mm base plate with the help of 4 no triangular stiffeners 100x350x20 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & J-rag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.						
	a) Single Arm						

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	(i) 10 mtr height	41				**41**	**Nos**
	b) Double Arm						
	(i) 10 mtr height	54				**54**	**Nos**
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conformimg to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kit, thermally hardened glass complete with LED drivers, surge protection i/c the cost of all accessories/ components required for proper operation, fully flexible for future upgradation and easy replacements for maintenance purposes, bucket elevator charges as approved and directed by the Engineer Incharge.						
	c) 120 Lm/Watt						
	(v) 90 Watt with 10800 Lumens	149				**149**	**Nos**
9	Supply and erection of electric energy meter, including meter testing fee, etc.						
	b) three phase, 4 wires:						
	ii) 3x50 Amp, 400 volts	1				**1.00**	**Nos**
10	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge						
	(iii) 25 KVA	1				**1.00**	**Nos.**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

P-1 GOJRA TOBA ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
11	Earthing of iron clad/aluminum switches, etc. with G.I. wire No. 8 SWG in G.I. pipe 15 mm (½") dia, recessed or on surface of wall and floor, complete with 1.5 metre long G.I. pipe, 50 mm (2") dia with reducing socket 4 to 5 metre below ground level, and 2 metre away from building plinth.	98				**98.00**	**No.**
12	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
	LCP-3 Phase	1				**1.00**	**Nos.**
13	Shifting of 20 Nos. Wapda Electric Poles						
14	Electric Connection Charges	1				**1.00**	**Each**

ENVIRONMENTAL HEALTH SAFETY BUDGET

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

DETAILED COST ESTIMATE

ENVIRONMENT AND SOCIAL MITIGATION COST

Sr No	Description	Unit	Quantity	Unit Rate (Rs.)	Amount Rs.
	Labor Safety				
1	Face Masks (3 PLY)	Nos	10.00	700.00	7,000
2	Safety Gum Shoes	Nos	10.00	1,350.00	13,500
3	Hand Gloves	Nos	10.00	245.00	2,450
4	First Aid Box (Including essential Medicine)	Nos	1.00	5,000.00	5,000
5	Safety Hard Helmets MSA	Nos	10.00	2,000.00	20,000
6	Safety Goggles	Nos	10.00	550.00	5,500
7	Reflective Safety Vests	Nos	10.00	550.00	5,500
8	Infrared Thermometer (Benetech GM-2200 OR equivalent)	Nos	1.00	45,000.00	45,000
				Sub Total	**103,950**
	Working Site Safety				
1	Reflective Safety Signs Boards	Nos	10.00	10,000.00	100,000
2	Reflective Safety PVC Cones (18 inch)	Nos	10.00	1,200.00	12,000
3	Road Guiding Portable Delineators with Chain	Nos	10.00	1,500.00	15,000
4	Reflective Safety Barricading Tape	Nos	10.00	1,500.00	15,000
5	Emergency Portable Light	Nos	10.00	5,000.00	50,000
6	Solid Waste Collection Drums	Nos	10.00	5,000.00	50,000
7	Fire Extinguishers DCP	Nos	10.00	7,000.00	70,000
				Sub Total	**312,000**
	Others				
1	Pole Hanging Waste Bins	Nos.	1.00	10,000	10,000
2	Water Sprinkling (Dust Abatement)	L.S	1.00	100,000	100,000
3	Roadside Plantation	L.S	1.00	57,050	57,050
4	Environmental Analytical Assessments (Ambient Air Quality Testing, Noise Testing, Vehicular Emissions Testing/Generators, Surface Water & Ground Water Testing)	L.S	1.00	250,000	250,000
5	Hiring of Environmentalist (03 Months Budget)	L.S	1.00	250,000	250,000
6	Labor Campsite Management	L.S	1.00	250,000	250,000
				Sub Total	**917,050**
	Total Amount (Rs)				**1,333,000**

RATE ANALYSIS

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis Road- 2

Description

Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)

Crush Stone **125 KM**

Sr. No.	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs)
1		**Material**					
	18-3 a(i)	i) Pit run or bed run gravel.	100 Cft	1	1	6,503.25	6,503.25
2		**Carriage**					
		1st KM	100 Cft	1	1.20	305.40	366.48
		2nd KM	100 Cft	1	1.20	145.65	174.78
		3rd KM	100 Cft	1	1.20	114.10	136.92
		4th KM	100 Cft	1	1.20	81.20	97.44
	1/1	5th KM	100 Cft	1	1.20	75.85	91.02
		6th KM	100 Cft	1	1.20	74.60	89.52
		7th KM	100 Cft	1	1.20	69.60	83.52
		8th KM	100 Cft	1	1.20	68.85	82.62
		9th KM	100 Cft	1	1.20	64.75	77.70
		10th KM	100 Cft	1	1.20	60.75	72.90
		From 11 km to 200 km	100 Cft	115	1.20	52.20	7,203.60
		Total.					**14,979.75**
		Total Amount per 100 Cft					**14,979.75**
		Total cast for Per Cft					**149.80**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis Road - 3

Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)

125 KM

Sr. No.	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/4(a)	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)	100 Cft		1	13,865.65	13,865.65
2	1/1	Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.					
		1st KM	100 Cft	1	1.22	305.40	372.59
		2nd KM	100 Cft	1	1.22	145.65	177.69
		3rd KM	100 Cft	1	1.22	114.10	139.20
		4th KM	100 Cft	1	1.22	81.20	99.06
		5th KM	100 Cft	1	1.22	75.85	92.54
		6th KM	100 Cft	1	1.22	74.60	91.01
		7th KM	100 Cft	1	1.22	69.60	84.91
		8th KM	100 Cft	1	1.22	68.85	84.00
		9th KM	100 Cft	1	1.22	64.75	79.00
		10th KM	100 Cft	1	1.22	60.75	74.12
		From 11 km to 200 km	100 Cft	115	1.22	52.20	7,323.66
		Total.					**22,483.43**
		Total Amount per 100 Cft					**22,483.43**
		Total cast for Per Cft					**224.83**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis Road - 4

ABC

Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick)
(iii) 4% Bitumen

125 Km

Sr. No.	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/10/a	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick) (iii) 4% Bitumen	per inch thickness per 100Sft.		1.00	12,951.30	12,951.30
2		Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.					
	1/1	1st KM	100 Cft	1	0.1243	305.40	37.96
		2nd KM	100 Cft	1	0.1243	145.65	18.10
		3rd KM	100 Cft	1	0.1243	114.10	14.18
		4th KM	100 Cft	1	0.1243	81.20	10.09
		5th KM	100 Cft	1	0.1243	75.85	9.43
		6th KM	100 Cft	1	0.1243	74.60	9.27
		7th KM	100 Cft	1	0.1243	69.60	8.65
		8th KM	100 Cft	1	0.1243	68.85	8.56
		9th KM	100 Cft	1	0.1243	64.75	8.05
		10th KM	100 Cft	1	0.1243	60.75	7.55
		From 11 km to 200 km	100 Cft	115	0.1243	52.20	746.17
		Total.					**13,829.32**
		Total Amount per 100 Sft					**13,829.32**
		Total cast for Per Sft					**138.29**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis Road - 5

AWC

Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (1.50 inch thick)
(iv) 4.5% Bitumen

125 Km

Sr. No.	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/10/a	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (1.50 inch thick) (iv) 4.5% Bitumen	Per inch thickness per 100Sft.		1.00	10,402.43	10,402.43
2		Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.					
	1/1	1st KM	100 Cft	1	0.1243	305.40	37.96
		2nd KM	100 Cft	1	0.1243	145.65	18.10
		3rd KM	100 Cft	1	0.1243	114.10	14.18
		4th KM	100 Cft	1	0.1243	81.20	10.09
		5th KM	100 Cft	1	0.1243	75.85	9.43
		6th KM	100 Cft	1	0.1243	74.60	9.27
		7th KM	100 Cft	1	0.1243	69.60	8.65
		8th KM	100 Cft	1	0.1243	68.85	8.56
		9th KM	100 Cft	1	0.1243	64.75	8.05
		10th KM	100 Cft	1	0.1243	60.75	7.55
		From 11 km to 200 km	100 Cft	115	0.1243	52.20	746.17
		Total.					**11,280.45**
		Total Amount per 100 Sft					**11,280.45**
		Total cast for Per Sft					**112.80**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis Road - 5

AWC

Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2.0 inch thick)
(iv) 4.5% Bitumen

125 Km

Sr. No.	1st BI-Annual-2023 (Jan to July) Toba Tek Singh	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/10/a	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (1.50 inch thick) (iv) 4.5% Bitumen	Per inch thickness per 100Sft.		1.00	13,869.90	13,869.90
2		Carriage of 100 cft of all materials like stone aggregate spawl kanker lime surkhi etc or 150 cft of timber by truck or by any other means owned by the contratcor.					
	1/1	1st KM	100 Cft	1	0.1243	305.40	37.96
		2nd KM	100 Cft	1	0.1243	145.65	18.10
		3rd KM	100 Cft	1	0.1243	114.10	14.18
		4th KM	100 Cft	1	0.1243	81.20	10.09
		5th KM	100 Cft	1	0.1243	75.85	9.43
		6th KM	100 Cft	1	0.1243	74.60	9.27
		7th KM	100 Cft	1	0.1243	69.60	8.65
		8th KM	100 Cft	1	0.1243	68.85	8.56
		9th KM	100 Cft	1	0.1243	64.75	8.05
		10th KM	100 Cft	1	0.1243	60.75	7.55
		From 11 km to 200 km	100 Cft	115	0.1243	52.20	746.17
		Total.					**14,747.92**
		Total Amount per 100 Sft					**14,747.92**
		Total cast for Per Sft					**147.48**

PUNJAB CITIES PROGRAM (PCP)DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis Road - 6

Description

Dismantling / Demolishing of existing Tuff Paver as directed by Engineer's Incharge, Complete in all respect

Dismantling of Tuff Paver **Unit.** **100 Sft**

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per 100 Sft						
			Qty			Rate Per Unit		Amount (Rs.)	
		LABOUR							
2	LB-015	Cooly un-skilled			0.75	Nos.	965.00	per day	723.75
								Total.	**723.75**
		Sundries	10	%					72.38
							Total Rs.		**796.13**
		Contractor's Profit	20	%					159.23
		Total							**955.35**
		ITEM RATES							
		Composite rate per 100 Sft						Rs.	**955.35**
		Composite rate per Sft						Rs.	**9.56**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis Road - 7

Description

Dismantling / Demolishing of existing kerb stone as directed by Engineer's Incharge, Complete in all respect

Dismantling Kerb stone — **Unit.** **100 Rft**

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per 100 Rft			
			Qty		Rate Per Unit	Amount (Rs.)
		LABOUR				
2	LB-015	Cooly un-skilled	2.00	Nos.	1,050.00 per day	2,100.00
					Total.	**2,100.00**
		Sundries	10	%		210.00
					Total Rs.	**2,310.00**
		Contractor's Profit	20	%		462.00
		Total				**2,772.00**
		ITEM RATES				
		Composite rate per 100 Rft			Rs.	**2,772.00**
		Composite rate per Rft			Rs.	**27.72**

PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis Road - 8

Description

Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)

Manhole Cover **Unit.** **Each**

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per Each			
			Qty		Rate Per Unit	Amount (Rs.)
	Page No112					
1	A	RPC Manhole Cover	1.00	No	8400 No	8,400.00
		Carriage				700
					Total Rs.	**9,100.00**
		LABOUR				
2	LB-024	Skilled Cooly	0.50	Nos.	1,400.00 per day	700.00
					Total.	**700.00**
		Sundries	10 %			70.00
					Total Rs.	**770.00**
					Total (1+2)	**9,870.00**
		Contractor's Profit	20 %			1,974.00
		Total				**11,844**
		ITEM RATES				
		Composite rate Set			**Rs.**	**11,844**

Annexure-C

Project Economic Analysis

FINANCIAL ANALYSIS ROAD NETWORK

TABLE - 9.1

AVERAGE OPERATING SPEEDS

Km/Hr

WITHOUT PROJECT CONDITION

Years	Cars/Jeeps	Hiace Wagon/ Pickup	Coaster/ Mini Buses	Buses	Trucks 2-AXLE	Trucks 3-AXLE & 4-AXLE	Trucks 5-AXLE & 6-AXLE
Base Year(2022)	25	20	20	15	15	15	15
2029	20	15	15	10	10	10	10
2037	15	10	10	10	10	10	10

WITH PROJECT CONDITION

Years	Cars/Jeeps	Hiace Wagon/ Pickup	Coaster/ Mini Buses	Buses	Trucks 2-AXLE	Trucks 3-AXLE & 4-AXLE	Trucks 5-AXLE & 6-AXLE
Base Year(2022)	25	20	20	15	15	15	15
2029	20	15	15	10	10	10	10
2037	15	10	10	10	10	10	10

TABLE - 9.3
VEHICLE OPERATING COSTS
FOR POOR ROAD CONDITIONS
WITHOUT PROJECT

Rs/Km

SPEEDS	MOTOR CYCLE	RICKSHAW	CAR	WAGON	MINI-BUS	BUS	TRUCK 2-AXLE	TRUCK 3-AXLE & 4-AXLE	TRUCK 5-AXLE & 6-AXLE
10	4.94	6.86	56.39	57.04	68.24	97.79	103.44	109.08	114.72
15	4.21	5.89	47.21	47.89	57.70	82.34	86.88	92.52	98.16
20	3.80	5.35	42.43	43.08	52.15	74.07	75.86	81.50	87.14
25	3.53	5.00	39.47	40.32	48.67	68.87	67.55	73.19	78.83
30	3.35	4.76	37.48	38.27	46.28	65.37	61.01	66.65	72.29
35	3.23	4.60	36.09	36.79	44.55	63.00	55.82	61.46	67.10
40	3.16	4.51	35.10	35.70	43.28	61.46	51.79	57.43	63.07
45	3.12	4.47	34.42	34.89	42.35	60.58	48.80	54.44	60.08
50	3.12	4.47	33.99	34.31	41.69	60.28	46.78	52.42	58.07
55	3.16	4.53	33.76	33.91	41.26	60.48	45.70	51.34	56.98
60	3.22	4.64	33.71	33.68	41.03	61.14	45.52	51.16	56.80
65	3.30	4.77	33.82	33.58	40.98	62.24	46.22	51.86	57.50
70	3.42	4.95	34.09	33.62	41.09	63.76	47.80	53.44	59.08
75	3.56	5.18	34.49	33.77	41.36	65.68	50.23	55.87	61.51
80	3.73	5.42	35.02	34.04	41.76	67.99	53.51	59.15	64.79
85	3.93	5.73	35.68	34.41	42.31	70.68	57.63	63.28	68.92

TABLE- 9.4
FOR GOOD ROAD CONDITIONS
WITH PROJECT

Rs/Km

SPEEDS	MOTOR CYCLE	RICKSHAW	CAR	WAGON	MINI-BUS	BUS	TRUCK 2-AXLE	TRUCK 3-AXLE & 4-AXLE	TRUCK 5-AXLE & 6-AXLE
10	3.71	5.12	35.59	34.99	41.42	61.63	65.14	69.34	73.54
15	3.08	4.29	28.49	28.17	33.56	50.94	54.02	58.23	62.43
20	2.73	3.83	24.80	24.60	29.44	45.22	46.71	50.92	55.12
25	2.50	3.53	22.53	22.35	26.84	41.60	41.22	45.42	49.62
30	2.35	3.33	21.00	20.80	25.05	39.13	36.87	41.08	45.28
35	2.25	3.19	19.92	19.67	23.75	37.40	33.40	37.60	41.80
40	2.19	3.11	19.16	18.83	22.77	36.21	30.65	34.85	39.06
45	2.15	3.07	18.62	18.20	22.05	35.43	28.55	32.76	36.96
50	2.15	3.08	18.26	17.73	21.51	35.01	27.06	31.26	35.46
55	2.17	3.12	18.06	17.39	21.13	34.89	26.13	30.33	34.54
60	2.21	3.19	17.99	17.17	20.88	35.05	25.76	29.96	34.16
65	2.28	3.30	18.04	17.06	20.76	35.48	25.92	30.12	34.32
70	2.37	3.44	18.19	17.03	20.74	36.14	26.61	30.81	35.01
75	2.49	3.61	18.45	17.09	20.83	37.04	27.82	32.02	36.22
80	2.62	3.81	18.80	17.23	21.01	38.17	29.54	33.74	37.94
85	2.77	4.04	19.24	17.44	21.29	39.52	31.77	35.98	40.18
90	2.95	4.31	19.77	17.73	21.65	41.08	31.77	35.98	40.18

TABLE - 9.5
VALUE OF TRAVEL TIME

DESCRIPTION	MOTORCYCLE	CAR	WAGON	COASTER/ FLYING COACH	TRUCK	BUS
TRAVEL TIME VALUE OF PASSENGERS/OCCUPANTS						
Average Income of Passenger (Rs./Month)	40,000	60,000	30,000	22,000	35,000	30,000
Average Income of Passenger (Rs./Annum)	480,000	720,000	360,000	264,000	420,000	360,000
Working Hours /Annum	2424	2424	2424	2424	2424	2424
Rate of passenger Rs./Hour	198	297	149	109	173	149
No. of Occupants	2.00	5.00	16.00	29.00	2.00	45.00
Travel Time Value of occupants---in financial terms (Rs./Hour)	396.04	1485.15	2376.24	3158.42	346.53	6683.17
Travel Time Value of occupants---in economic terms (Rs./Hour) 25%	**99.01**	**371.29**	**594.06**	**789.60**	**86.63**	**1670.79**

NOTE:- 'The value of travel time in a number of studies have been estimated at 25% to 33% of the wage rate due to lack of information on the split of work and non-work travel among passengers and the 'proportion of non-wage earners among passengers.

TABLE - 9.6

Gojra (3.1 km)

ANNUAL VEHICLE OPERATING COST

WITHOUT PROJECT

(Million Rs.)

Years	Voc/Km (Rs.)	Traffic Volume ADT	Distance Annual Km	Total Cost Million Rs.
Motor Cycles\Rickshaw				
Base Year(2022)	4.26	3540	1,132	17.08
2029	4.57	6019	1,132	31.15
2037	5.05	10833	1,132	61.91
Cars				
Base Year(2022)	39.47	1384	1,132	61.83
2029	42.43	2353	1,132	112.98
2037	47.21	4236	1,132	226.26
Wagons				
Base Year(2022)	43.08	5	1,132	0.24
2029	47.89	9	1,132	0.46
2037	57.04	15	1,132	0.99
Bus				
Base Year(2022)	82.34	3	1,132	0.28
2029	97.79	5	1,132	0.56
2037	97.79	9	1,132	1.02
T.Trolly + Trucks 2-AXLE				
Base Year(2022)	86.88	14	1,132	1.38
2029	103.44	24	1,132	2.79
2037	103.44	43	1,132	5.01
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	92.52	3	1,132	0.31
2029	109.08	5	1,132	0.63
2037	109.08	9	1,132	1.13
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	98.16	0	1,132	-
2029	114.72	0	1,132	-
2037	114.72	0	1,132	-
TOTAL				
Base Year(2022)				**81.13**
2029				**148.57**
2037				**296.33**

Note :"VOC" means Vehicle Operating Cost

TABLE - 9.7
Gojra (3.1 km)
ANNUAL VEHICLE OPERATING COST
WITH PROJECT

(Million Rs.)

Years	Voc/Km (Rs.)	Traffic Volume ADT	Distance Annual Km	Total Cost Million Rs.
Motor Cycles\Rickshaw				
Base Year(2022)	2.65	3540	1,132	10.61
2029	2.72	6019	1,132	18.52
2037	2.84	10833	1,132	34.84
Cars				
Base Year(2022)	19.16	1384	1,132	30.00
2029	19.92	2353	1,132	53.05
2037	21.00	4236	1,132	100.66
Wagons				
Base Year(2022)	18.83	5	1,132	0.11
2029	19.67	9	1,132	0.19
2037	20.80	15	1,132	0.36
Bus				
Base Year(2022)	36.21	3	1,132	0.12
2029	37.40	5	1,132	0.22
2037	39.13	9	1,132	0.41
T.Trolly + Trucks 2-Axle				
Base Year(2022)	22.77	14	1,132	0.36
2029	23.75	24	1,132	0.64
2037	25.05	43	1,132	1.21
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	34.85	3	1,132	0.12
2029	37.60	5	1,132	0.22
2037	41.08	9	1,132	0.43
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	39.06	3	1,132	0.13
2029	41.80	5	1,132	0.24
2037	45.28	9	1,132	0.47
TOTAL				
Base Year(2022)				**41.46**
2029				**73.08**
2037				**138.38**

Note :"VOC" means Vehicle Operating Cost

TABLE - 9.8
Gojra (3.1 km)

(Million Rs.)

YEARS	VEHICLE OPERATING COSTS		SAVINGS
	WITHOUT PROJECT	WITH PROJECT	
Base Year(2022)	81.13	41.46	39.67
2029	148.57	73.08	75.49
2037	296.33	138.38	157.95
		TOTAL	**273.11**

TABLE - 9.9

Gojra (3.1 km)

ANNUAL VALUE OF TRAVEL TIME COST

WITHOUT PROJECT

(Million Rs.)

Years	VOT Rs/km	Traffic Volume ADT	Distance Annual (Km)	Total Cost Million Rs.
Motor Cycles\Rickshaw				
Base Year(2022)	3.96	3540	1,132	15.86
2029	4.95	6019	1,132	33.71
2037	6.60	10833	1,132	80.91
Cars				
Base Year(2022)	14.85	1384	1,132	23.26
2029	18.56	2353	1,132	49.43
2037	24.75	4236	1,132	118.64
Wagons				
Base Year(2022)	29.70	5	1,132	0.17
2029	39.60	9	1,132	0.38
2037	59.41	15	1,132	1.03
Bus				
Base Year(2022)	39.48	3	1,132	0.13
2029	52.64	5	1,132	0.30
2037	78.96	9	1,132	0.82
T.Trolly + Trucks 2-Axle				
Base Year(2022)	5.78	14	1,132	0.09
2029	8.66	24	1,132	0.23
2037	8.66	43	1,132	0.42
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	5.78	3	1,132	0.02
2029	8.66	5	1,132	0.05
2037	8.66	9	1,132	0.09
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	5.78	3	1,132	0.02
2029	8.66	5	1,132	0.05
2037	8.66	9	1,132	0.09
TOTAL				
Base Year(2022)				**40**
2029				**84**
2037				**202**

Note :"VOT" means value of Travel Cost

TABLE - 9.10
Gojra (3.1 km)
ANNUAL VALUE OF TRAVEL TIME COST
WITH PROJECT

(Million Rs.)

Years	VOT Rs/km	Traffic Volume ADT	Distance Annual (Km)	Total Cost Million Rs.
Motor Cycles\Rickshaw				
Base Year(2022)	2.65	3540	1,132	10.61
2029	2.72	6019	1,132	18.52
2037	2.84	10833	1,132	34.84
Cars				
Base Year(2022)	19.16	1384	1,132	30.00
2029	19.92	2353	1,132	53.05
2037	21.00	4236	1,132	100.66
Wagons				
Base Year(2022)	18.83	5	1,132	0.11
2029	19.67	9	1,132	0.19
2037	20.80	15	1,132	0.36
Bus				
Base Year(2022)	36.21	3	1,132	0.12
2029	37.40	5	1,132	0.22
2037	39.13	9	1,132	0.41
T.Trolly + Trucks 2-Axle				
Base Year(2022)	22.77	14	1,132	0.36
2029	23.75	24	1,132	0.64
2037	25.05	43	1,132	1.21
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	34.85	3	1,132	0.12
2029	37.60	5	1,132	0.22
2037	41.08	9	1,132	0.43
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	39.06	3	1,132	0.13
2029	41.80	5	1,132	0.24
2037	45.28	9	1,132	0.47
TOTAL				
Base Year(2022)				**41.46**
2029				**73.08**
2037				**138.38**

TABLE - 9.11
Gojra (3.1 km)

(Million Rs.)

YEARS	ANNUAL VALUE OF TRAVEL TIME COST (VOTT)		SAVINGS
	WITHOUT PROJECT	WITH PROJECT	
Base Year(2022)	39.56	41.46	(1.90)
2029	84.16	73.08	11.09
2037	202.00	138.38	63.62
		TOTAL	**72.81**

TABLE - 9.12

Gojra (3.1 km)

TOTAL PROJECT BENEFITS

(Million Rs.)

YEARS	SAVINGS		TOTAL SAVINGS
	VOC	VOTT	
Base Year(2022)	39.67	(1.90)	37.77
2029	75.49	11.09	86.58
2037	157.95	63.62	221.57
		TOTAL	**346**

TABLE - 9.13

Gojra (3.1 km)

Calculation of Economic Internal Rate of Return

Million Rs.

Years	PROJECT ECONOMIC COSTS			Project Economic Benefits	**Net Benefits Pattern at Economic Prices**			
	Investment	O & M	Total Costs		**(a)**	**(b)**	**(c)**	**(d)**
1	258.14	0.00	258.14	0.00	-258.14	-258.14	-283.95	-283.95
2		0.00	0.00	37.77	37.77	34.00	37.77	34.00
3		0.00	0.00	43.44	43.44	39.10	43.44	39.10
4		0.00	0.00	49.96	49.96	44.96	49.96	44.96
5		0.00	0.00	57.45	57.45	51.71	57.45	51.71
6		0.00	0.00	66.07	66.07	59.46	66.07	59.46
7		0.00	0.00	75.98	75.98	68.38	75.98	68.38
8		0.00	0.00	87.38	87.38	78.64	87.38	78.64
9		0.00	0.00	100.48	100.48	90.43	100.48	90.43
10		0.00	0.00	115.55	115.55	104.00	115.55	104.00
Total :	258.14	0.00	258.14	634.08	375.94	312.53	350.13	286.72

DISCOUNT RATES	**PRESENT WORTH OF COST**		**Present Worth of Benfefit**	**NET PRESENT WORTH**			
10 %	234.67	234.67	270.29	103.19	69.40	79.72	45.93
12 %	230.48	230.48	241.56	71.47	41.27	48.42	18.23
18 %	218.76	218.76	176.60	1.99	-20.09	-19.89	-41.96
20 %	215.12	215.12	160.27	-14.78	-34.81	-36.29	-56.32
ECONOMIC INTERNAL RATE OF RETURN 12% DR				18.22	15.70	15.94	13.53
BENEFIT COST / RATIO AT 12 % D.R			1.05				

* A factor of 0.9 has been used for Capital Cost and O&M Cost in the Economics Terms.

(a) Base Case assuming 10 Years period of analysis.

(b) Benefits decreased by 10 %

(c) Cost over-run by 10 %

(d) Benefit reduction and cost over-run both occuring simultaneously.

Annexure-D

Gant Chart

TENTATIVE PROJECT IMPLEMENTATION SCHEDULE FOR IMPROVEMENT & REHABILITATION OF ROADS IN GOJRA CITY

YEAR (2022-2023)

Road	MAY-23				JUN-23				JUL-23				AUG-23			
P1-(Gojra Toba Road)																

Annexure-E
E&S SOPs

Environmental & Social Screening 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 document[2] 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:	Shahrukh Arif MOI, M. Asad MOP
Name of MC:	MC Gojra
Sub-Project Sector:	Roads of Gojra
Sub-Project Title:	Rehabilitation of P-1 Gojra Toba Road near Railway Chowk, Toba Tek Sigh 3.1 km
Sub- Project Categorization:	**E-1** ☐ **S-1** ☐ **E-2** ■ **S-2** ■ **E-3** ☐ **S-3** ☐
Date of Screening:	**16/11/2022**
Anticipated Project Activities	• Geometric Improvement • Asphalt Pavement • Tuff Pavement on Shoulders • Pavement Marking • Street Lighting • Improvement of drainage system
Estimated Cost of Subprojects as per PC-1:	**295.88 million PKR – PC1** **Estimated Cost of ESMP 1333000/-pkr**
Completion Time/Duration	**3 Months**
Estimated Labor for Subproject	**20-25**

[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?			
Legally protected Area		✓	The road to be rehabilitated is a commercial or central business area surrounded by multiple shops, small food outlets, banks and so on. It doesn't come under any environmental sensitive area category. Details are shown hereunder: • Not a legally protected area • No surface body found within 250 meters of the proposed project. • No estuary and coastal water body found in the project area • Not a protected area for biodiversity • Not a buffer zone or having mangroves or manmade forest or any other area of environmental importance that sought special attention or measures.
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project[3]		✓	
Estuarine		✓	
Special area for protecting biodiversity		✓	
Buffer zone of protected area		✓	
Mangroves Forest		✓	
Man-made forest /game reserve, orchid /crops or any other area of environmental importance			
Socially sensitive /important areas/communities/ people?			
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, *Gordwarah*, Temple, Fort, archeological/historical site) within 100 m of the proposed subproject[4]	✓		Mosque and Church were observed within 100 m of the proposed sub-project but these will not be affected by the project activities. Mitigation measures will be provided in the ESMP
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project[5]	✓		Educational institutes were observed within 100 meters of project site. However, the probability of any negative impact to these sensitive receptors owing to project activities is low.
Any graveyard of local community (Muslims or Christians)		✓	Graveyard of any local community isn't present at the proposed project site
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)?		✓	It's a small scale project regarding rehabilitation of existing road surface. Hence, no demographically or socio-economically vulnerable aspects of the sub-project were observed.
Already existing infrastructure [7](including public amenities) which may be required to dismantle or may be affected temporarily by any means?		✓	The land belongs to MC and all sub-project activities will be carried out there. Similarly, existing road is to be rehabilitated hence, portable items of the shopkeepers will be relocated temporarily. Encroachment in the form of 17 structures was observed in the form of cemented floors, tuft tiles pavements and footsteps that would be dismantled before execution phase. Moreover, one weigh station owned by MC Gojra is over there which covers some portion of the road that

Screening Questions	Yes	No	Remarks
			will be covered by tuff pavement through design change to avoid dismantling. For the compensation of loss of 17 structures, a detailed ARAP will be developed. 20 Electric poles will be shifted as per information given in the PC-I
B. Potential Environmental Impacts Will the Sub-Project cause…			
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	The proposed project site doesn't have any environmentally sensitive or protected areas.
Cutting of trees?		✓	No tree cutting is required as per scope of work under Sub-Project.
Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	No disruption to any habitat/ecosystem due to any Sub-project activities.
Generation of wastewater during construction or operation?		✓	No wastewater generation is anticipated as per scope of work during execution and operational phase.
Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		✓	No such impact on surface and ground water is anticipated owing to project execution phase.
Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?		✓	No alteration of any waterway involved in the scope of Sub-Project.
Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		✓	No labor camps are required to be established as per limited work activities under Sub-Project. However, EHS SOPs developed by PMDFC will be strictly ensured to be followed
Over pumping of ground water, leading to salinization and ground subsidence?		✓	Over pumping of ground water is not required for this sub project.
Serious contamination of soil due to construction works?		✓	No such impact is expected as per scope of work
Aggravation of solid waste problems in the area?	✓		No such impact is expected as per scope of work. However, mitigation plan is proposed to tackle generated waste.
Generation of hazardous waste?		✓	Not envisaged
Increased air pollution due to sub-project construction and operation?	✓		Suspended dust particles during execution phase might pollute the surrounding air. Hence, water sprinkling at the site is proposed.

[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
Noise and vibration due to sub-project construction or operation?	✓		Minor impact of noise and vibration owing to movement of heavy vehicles is envisaged during execution phase.
Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		✓	No such impact is anticipated as probability of liquid waste is low. However, waste bins at the site would be placed for storage of organic waste if any.
Use of chemicals during construction?		✓	In the light of sub-project scope, no hazardous chemical will be used during execution phase.
C: Potential Social Impacts Will the Sub-Project cause…			
Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		✓	No damage or loss to PCR's is expected due to this sub project.
Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	No significant displacement/ any sort of resettlement/ economic loss is envisaged due to any Sub-Project interventions. However, minor encroached surfaces of shops might be dismantled during execution phase. Hence, ARAP to compensate the economic losses would be prepared.
Disproportionate impacts on the poor, women and children and or other vulnerable groups [8](mentioned above)?		✓	No Disproportionate impacts on the poor, women and children and or other vulnerable groups are anticipated during execution phase
Temporary impediments in movements of people/transport and animals?	✓		There will be temporary hindrance in the movement of traffic and pedestrians during execution phase of the project. Nearby shop owners have been informed during public consultation phase.
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)?		✓	It's a small-scale time framework project so population influx or increased burden on social infrastructure and services will not be effected.
Social conflicts if workers from other areas are hired?		✓	Preference will be given locals for work to avoid any conflict.
Risks and vulnerabilities related to occupational health and safety (OHS) due to physical, chemical, biological, and radiological hazards during project construction and operation?	✓		Measures would be taken to address or alleviate the probability of OHS risk during execution phase through administrative controls. However, stringent SOPs regarding actualization of PPEs during execution phase will be implemented at the proposed project site.

[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
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?		✓	Likelihood of such risks and hazards is low as per the scope of the project.
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?	✓		To avoid unfortunate events, site safety should be implemented in true spirit in the form of signages, reflective tapes awareness boards by the contractors and so on.
Any impact on sensitive receptors (mentioned above)		✓	No significant impact is anticipated during execution phase. However, water sprinkling would be ensured to tackle the suspended dust particles.
Any impact of negative nature on already existing infrastructure including public amenities	✓		There is no major significant impact expected to any public infrastructure owing to project activities except the only weigh station that covers some of the road portion. Moreover, minor encroached areas might be affected during construction of storm water drain and affected persons (APs) will be compensated for that through ARAP. In addition, access to business would be temporarily disturbed; already informed during public consultation phase. In the long run, this project is in the favor of local community and they are willing to corporate and wanted MC to get this project completed in a timely manner.

Prepared By:	**Reviewed By:**	**Endorsed By:**
Name: Haider Ali	**Name: Asif Gillani**	**Name:**
Designation : Consultant	**Designation** DPO PMDFC	**Designation** MOI&S
Signature: 	**Signature:**	**Signature:**
		Date:
Date: 16-11-2022	**Date:**	

INVOLUNTARY RESETTLEMENT SCREENING CHECKLIST

Name of City/MC/LG: MC Gojra

ESFP: Asad MOP

Sub-Project Sector: Roads

Sub-Project Title: Rehabilitation of Gojra-Toba Road

Sub- Project Categorization: S-1 ☐ **S-2** ■ **S-3** ☐

Date of Screening: 16 -11-2022

SECTION I	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No	✓			Land acquisition is required for this project. Ramps and footsteps are found within RoW and to be dismantle. One weight station owned by MC but further on lease which will not be dismantled or shifted rather design change will cover that portion with tuff pavements.
If yes, then describe the type of land being acquired from thecategories below:				
Has any AED been conducted at the proposed location by the government? Yes/No		✓		No AED has been conducted at the proposed project location by MC and it was confirmed during public consultation
Land (Quantify and describe types of land being acquired in"remarks column".		✓		Not applicable
Government and LG owned land free of occupation(agriculture or settlement)		✓		Sub-project site under possession of MC and free from all sort of settlements. Shops for commercial activities over there also belong to MC Gojra.
Government or state-owned land (other than LG) free ofoccupation (agriculture or settlement)		✓		Not Applicable
Private land		✓		
Residential		✓		
Commercial		✓		
Agricultural		✓		
Communal		✓		
Others (specify in "remarks").		✓		
Name of owner/owners and type of ownership document ifavailable.		✓		MC Gojra owns the land for Sub-Project.
If land is being acquired, describe any structures constructedon it		✓		Ramps and footsteps are found within RoW and to be dismantle for which

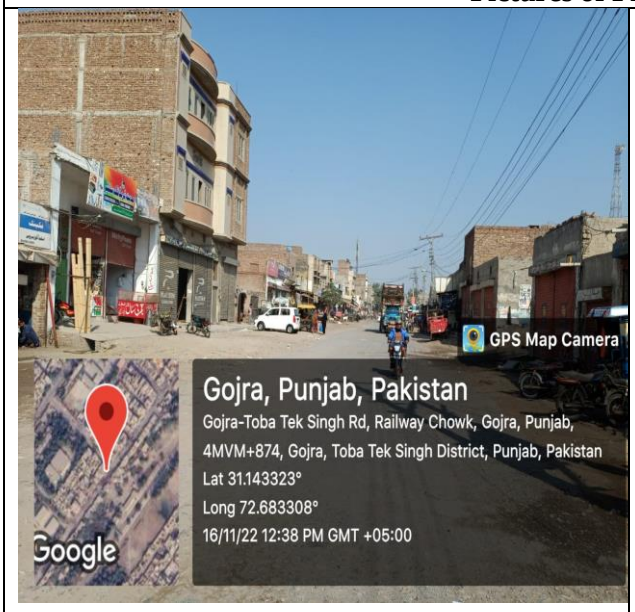
SECTION I	Yes	No	Expected	Remarks
				ARAP will be developed to compensate the loss of structure
Land-based assets:				Not Applicable
Residential structures		✓		
Commercial structures (specify in "remarks")		✓		
Community structures (specify in "remarks")		✓		
Agriculture structures (specify in "remarks")		✓		
Public utilities (specify in "remarks")		✓		Ramps and footsteps are found within RoW and to be dismantled
Others (specify in "remarks")		✓		Not applicable
If agricultural land is being acquired, specify the following:				The proposed project site is a commercial zone and belongs to MC Gojra. Hence, no agriculture land is required under sub-project.
Agriculture related impacts		✓		Not Applicable
Crops and vegetables (specify types and cropping area in"remarks).		✓		
Trees (specify number and types in "remarks").		✓		
Others (specify in "remarks").		✓		
Affected Persons (APs)			✓	No significant impact to APs. Only encroached footsteps and cemented structure need to be dismantled owing to project activity, which will be compensated through ARAP before start of civil work.
Will any people be displaced from the land when acquired?Yes/No		✓		Not Applicable
Number of APs		✓		
Males		✓		
Females		✓		
Titled landowners		✓		
Tenants and sharecroppers		✓		
Leaseholders		✓		
Agriculture wage laborers		✓		
Encroachers and squatters (specify in remarks column)			✓	No squatters observed. Encroached structures would be compensated. Displayed portable items outside the shops can be moved and for that no compensation is required. This aspect has been

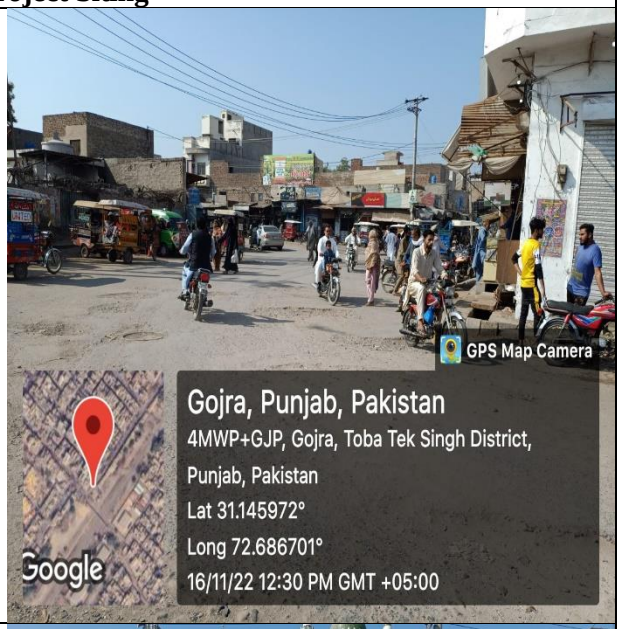
SECTION I	Yes	No	Expected	Remarks
				discussed during public consultation phase.
Vulnerable APs (e.g. women headed households, minors and aged, orphans, disabled persons, and those below the poverty line). Specify the number and vulnerability in "remarks".		✓		No vulnerable APs identified.
Others (specify in "remarks")		✓		Not applicable
How will people be affected?			✓	Construction of storm water drain can temporarily disturb the business activities. This aspect has been covered and communicated to the public during public consultation phase and mitigation provided in the ESMP.

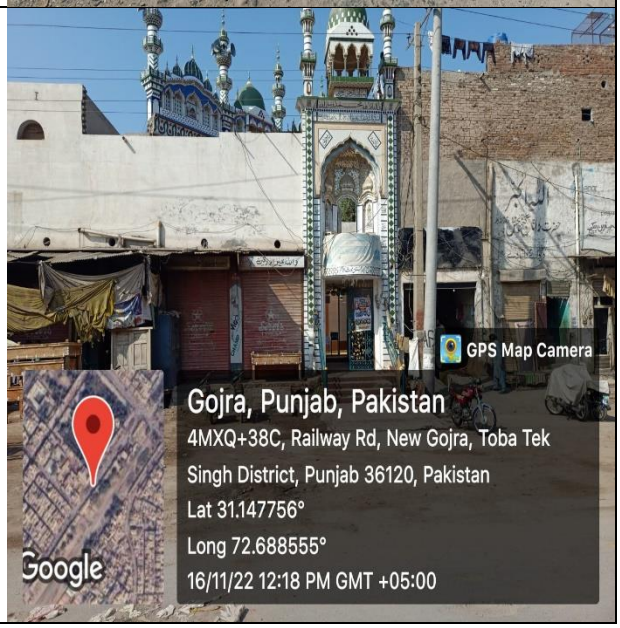
[1] The sub-projects have to avoid all locations where any government led AED has been conducted.

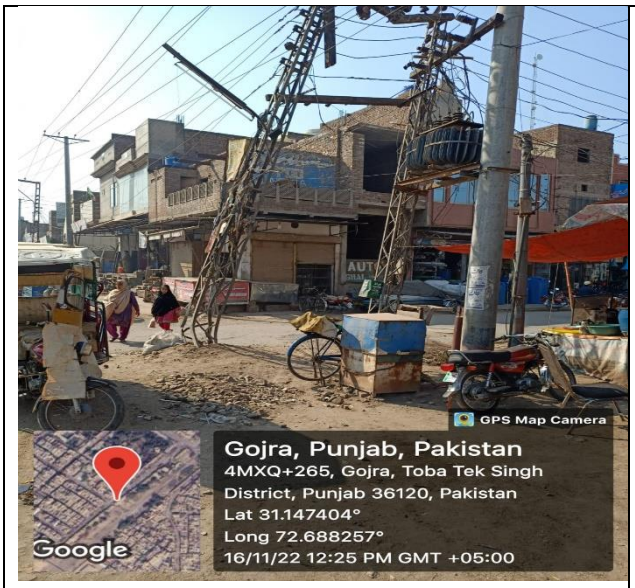
Prepared By:	**Reviewed By:**	**Endorsed By:**
Name: Haider Ali	**Name:**	**Name:**
Designation: Consultant	**Designation** DPO ESM	**Designation** MOP
Signature:	**Signature:**	**Signature:**
Date: 16-11-2022	**Date:**	**Date:**

Pictures of Project Siting





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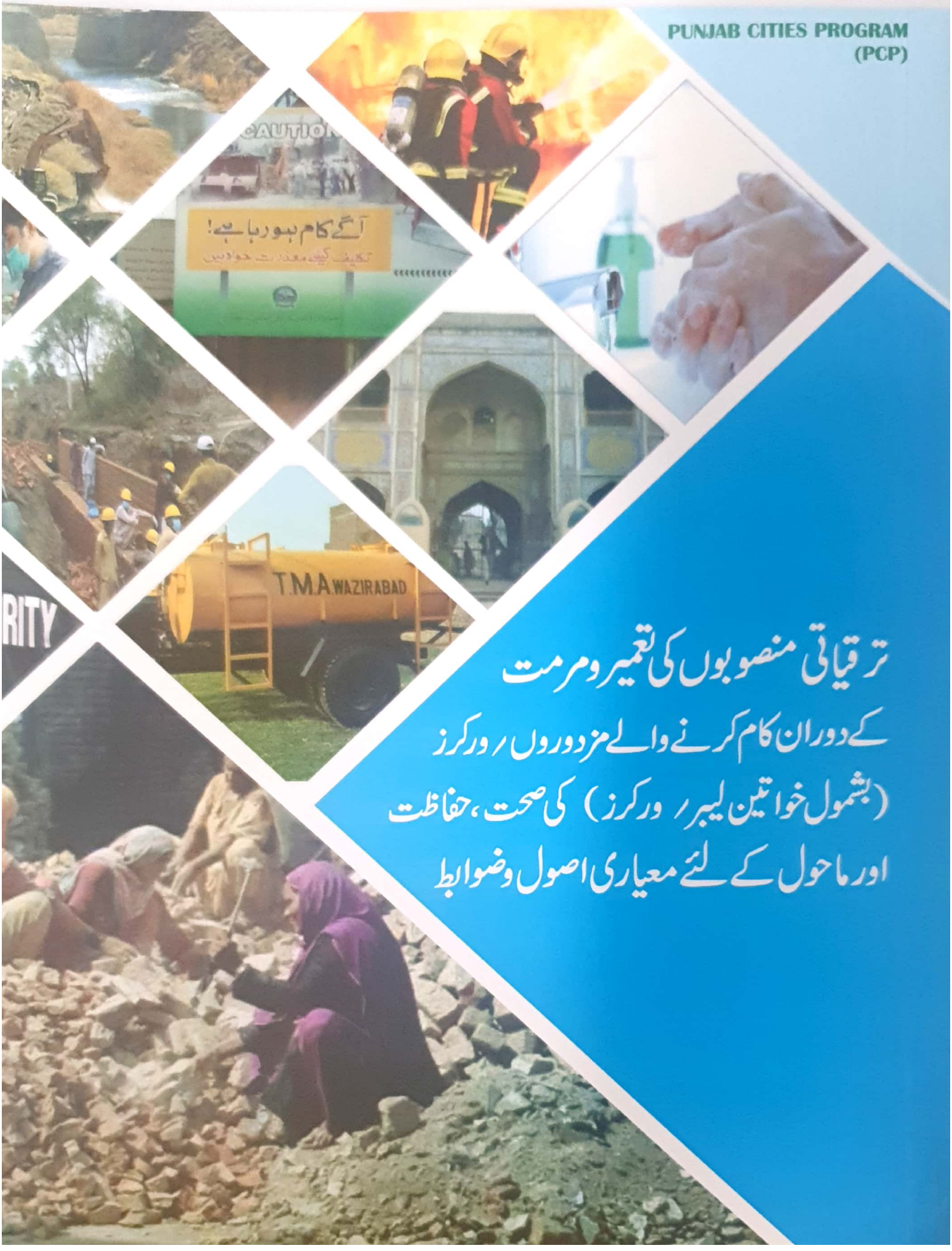
Gojra, Punjab, Pakistan
4MXQ+265, Gojra, Toba Tek Singh
District, Punjab 36120, Pakistan
Lat 31.147404°
Long 72.688257°
16/11/22 12:25 PM GMT +05:00
Google


GPS Map Camera
Gojra, Punjab, Pakistan
4MWP+MWW, Gojra, Toba Tek Singh District,
Punjab 36120, Pakistan
Lat 31.146776°
Long 72.687518°
16/11/22 12:27 PM GMT +05:00
Google

PUNJAB CITIES PROGRAM
(PCP)



ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں / ورکرز (بشمول خواتین لیبر / ورکرز) کی صحت، حفاظت اور ماحول کے لئے معیاری اصول وضوابط

حق اشاعت

پیش لفظ

لوکل گورنمنٹ اینڈ کمیونٹی ڈویلپمنٹ ڈیپارٹمنٹ اور پنجاب میونسپل ڈویلپمنٹ فنڈ کمپنی (PMDFC) نے ورلڈ بینک کے اشتراک سے پنجاب سیٹیز پروگرام (PCP) کا کامیابی سے اجرا کر دیا ہے. اس منصوبے کے تحت صوبہ پنجاب کے 16 چھوٹے شہروں (MCs) بشمول بہاولنگر، بوریوالا، خانیوال، کوٹ ادو، وہاڑی، گوجرہ، جھنگ، کمالیہ، اوکاڑا، ڈسکہ، حافظ آباد، جہلم، کاموکی، مریدکے [illegible] ترقیاتی کاموں پر کامیابی سے کام جاری ہے۔ ان ترقیاتی منصوبوں میں ویسٹ مینجمنٹ، پانی کی فراہمی، نکاسی آب [illegible] مرمت، کمیونٹی پارکس کی بحالی اور قدرتی آفات کی روک تھام کے منصوبہ جات شامل ہیں۔

پنجاب سیٹیز پروگرام (PCP) کے منصوبہ جات کی تکمیل کے دوران سماجی اور ماحولیاتی مسائل کی جانچ پڑتال اور اس کے حل کے لئے انوائرنمنٹل اینڈ سوشل سیف گارڈز (ESSs) ٹیم نے انوائرنمنٹل اینڈ سوشل مینجمنٹ فریم ورک (ESMF) بنایا ہے. مختلف منصوبہ جات اسی فریم ورک کی رو سے پایہ تکمیل تک پہنچ رہے ہیں۔

تعمیراتی اور ترقیاتی کاموں کی تکمیل میں تعمیراتی جگہوں پر کام کرنے والے مزدوروں/لیبر (بشمول خواتین) کی صحت اور کام کرنے کے دوران حفاظت بہت اہمیت رکھتی ہے۔ اس اہم مسئلہ کو ملحوظِ خاطر رکھتے ہوئے، پی ایم ڈی ایف سی کے زیرِ اہتمام پنجاب سٹیز پروگرام کی انوائرنمنٹ اینڈ سوشل مینجمنٹ ٹیم نے **" ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں، ورکرز (بشمول خواتین لیبر/ورکرز) کی صحت، حفاظت اور ماحول کیلئے بنیادی اصول وضوابط"** مرتب کے ہیں تاکہ متعلقہ میونسپل کمیٹیز/کارپوریشنز (MCs) کے عہدیداران اور ٹھیکیداران کو آگاہی فراہم کی جائے۔

اغراض و مقاصد

۱۔ مجوزہ معیاری اصول وضوابط پنجاب سیٹیز پروگرام (PCP) کے تحت پنجاب میونسپل ڈویلپمنٹ فنڈ کمپنی (PMDFC) کے ماہرین ماحولیات نے پروگرام ڈائریکٹر (PCP) اور ڈپٹی پروگرام ڈائریکٹر (PCP) کی زیرنگرانی تشکیل دیئے ہیں۔

۲۔ شہری ترقی کے ترقیاتی منصوبہ جات کی تعمیر ومرمت میں مزدور/ورکرز بنیادی کردار ادا کرتے ہیں۔ ان (SOPs) کا بنیادی مقصد مزدور/ورکرز (بشمول خواتین لیبر / ورکرز) کو تعمیراتی جگہوں (Constrcution sites) اور لیبر کیمپس میں ماحولیاتی اور سماجی تحفظ فراہم کرنا اور صحت، ماحولیات اور کسی خطرناک صورتحال سے بچنے کے لئے حفاظت فراہم کرنا ہے۔

۳۔ یہ SOPs (PCP) پنجاب سیٹیز پروگرام کے تحت 16 شہروں کی میونسپل کمیٹیز/کارپوریشنز میں تعمیر ومرمت کے تمام پراجیکٹس پر لاگو ہوں گے۔

۴۔ یہ SOPs مزدوروں/کام کرنے والوں/دیہاڑی دار (بشمول خواتین) پر بلاتخصیص لاگو ہوں گے۔

۵۔ ان SOPs کو موثر اور یقینی بنانے کے لئے انھیں ٹھیکیداروں کے کنٹریکٹ کا حصہ بنانا اور ان پر عمل درآمد کرانا میونسپل کمیٹیز/کارپوریشنز کی ذمہ داری ہے۔ جسے پی ایم ڈی ایف سی کی متعلقہ پروگرام ٹیم یقینی بنائے گی۔

پیغام

پاکستان کی ترقی میں تعمیراتی کاموں کے دوران کام کرنے والا مزدور طبقہ نہایت اہمیت کا حامل ہے اور انکے صحت وتندرستی سے متعلق مسائل کا مؤثر حل انتہائی ضروری ہے۔ " ترقیاتی منصوبوں کی تعمیر و مرمت کے دوران کام کرنے والے مزدوروں / ورکرز (بشمول خواتین لیبر/ورکرز) کی صحت، حفاظت اور ماحول کیلئے بنیادی اصول وضوابط " کی اشاعت و ترویج اوران پر بروقت عمل درآمد بے حد ضروری ہے جس سے اس طبقے کے بنیادی حقوق کا تحفظ یقینی بنایا جا سکے گا اور اس طرح اس طبقے کی کارکردگی میں بھی بہتری نظر آئے گی۔ ان اصولوں کے تحت ہر ٹھیکیدار کو ورکرز کی صحت اور حفاظت کی ذمہ داری دی گئی ہے۔ مزدور تعمیراتی کاموں کے دوران خطرات کے مطابق ذاتی حفاظتی سامان بھی استعمال کریں گے جس سے دوران کام حادثات میں بھی نمایاں کمی نظر آئے گی۔ ماحولیات اور صحت کے اصولوں کو مدنظر رکھتے ہوئے ہر سطح پر ہم اس بات کو یقینی بنانے کی کوشش کریں گے کہ ہماری پالیسیاں اور طرز عمل فعال ہوں۔ ماحولیات، صحت اور حفاظت (EHS) کے اصولوں کو اپنانے میں کسی بھی قسم کا سمجھوتہ نہیں کیا جائے گا۔ میں امید کرتا ہوں کہ ان اصول وضوابط کی روشنی میں مزدور/ورکرز (بشمول خواتین لیبر) کے حقوق کی پاسداری کو ایک نیا رخ ملے گا اور حکومتی عہدیداران اور ٹھیکیداران بھی اپنی ذمّہ داریوں کا احساس کریں گے۔ اور اس سلسلے میں پی ایم ڈی ایف سی اور پنجاب سیٹیز پروگرام کی انوائرنمنٹ اینڈ سوشل سیف گارڈز (ESSs) ٹیم بلاشبہ مبارکباد کی مستحق ہے اور یہ توقع کی جا سکتی ہے کہ وہ مستقبل میں ان قواعد وضوابط کی نگرانی کے لئے بھرپور اقدامات کریں گے۔

محمد عامر نذیر
پروگرام ڈائریکٹر
پنجاب سیٹیز پروگرام (PCP)

زیر نگرانی

افتخار رسول
ڈپٹی پروگرام ڈائریکٹر
پنجاب سیٹیز پروگرام (PCP)

عاشق چوھدری
سینئر پروگرام آفیسر (انفراسٹرکچر)
پنجاب سیٹیز پروگرام (PCP)

تکنیکی ٹیم

رضوانہ انجم
پروگرام آفیسر (انوائرنمنٹ اینڈ سوشل سیف گارڈز)
پنجاب سیٹیز پروگرام (PCP)

تہمینہ کرن
ڈپٹی پروگرام آفیسر (ESSs)
پنجاب سیٹیز پروگرام (PCP)

کنزیٰ ندیم
ریسرچ اینالسٹ
پنجاب سیٹیز پروگرام (PCP)

(۱) لیبر کیمپس کے لئے معیاری اصول و ضوابط

سرگرمیاں

۱. مزدور / لیبر کیلئے عارضی کیمپ / رہائش گاہ کے انتظام و قیام کے لئے جگہ کا انتخاب

مسائل

- مقامی آبادی کے وسائل پر اضافی بوجھ
- مقامی آبادی سے تنازعات کا خدشہ
- سماجی، مذہبی، اور سکیورٹی کے مسائل۔

حفاظتی اقدامات

ٹھیکیدار لیبر کیمپس کے قیام کے وقت مندرجہ ذیل باتوں کا خیال رکھے گا:

- کیمپس ایسی جگہوں پر لگائے جائیں جو ماحولیاتی، مذہبی، سماجی اور ثقافتی نقطہ نظر سے قابل قبول ہوں۔
- مقامی آبادی کے ساتھ کسی تنازعہ سے بچنے کے لیئے آبادی سے دور جگہ کا انتخاب کیا جائے
- لیبر کیمپ کی جگہ اور سہولیات سے متعلق ایک تفصیلی نقشہ تیار کر کے متعلقہ میونسپل کمیٹی/کارپوریشن میں جمع کرایا جائے۔
- دیگر مقامی ادارے جیسے صحت، سکیورٹی وغیرہ کو لیبر کیمپ کے مقام اور مدت کے بارے مطلع کیا جائے تا کہ کسی ناگہانی صورتحال سے بچا جا سکے۔
- لیبر کیمپس کے قیام کیلیئے عارضی جگہ/زمین کا حصول زمین کے مالک کی مرضی، طے کردہ کرایہ اور باقاعدہ تحریری معاہدے کی صورت میں کیا جائے۔
- لیبر کیمپس سے ملحقہ بنیادی سہولتوں جیسے پینے کا پانی اور نکاسی آب کے انتظامات سے ماحولیاتی آلودگی میں اضافہ نہ ہو

سرگرمیاں

۲۔لیبر کیمپ میں مہیا کی جانے والی سہولیات

مسائل

- مناسب انفراسٹرکچر کی کمی
- بنیادی ضروریات اور سہولیات جیسے پانی اور بجلی کی فراہمی ،صفائی ستھرائی کی سہولیات اور نکاسی آب کی فراہمی

حفاظتی اقدامات

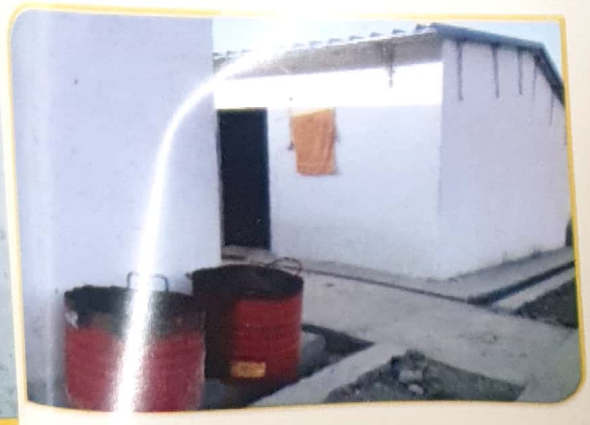
ٹھیکیدار کیمپ سائٹس پر درج ذیل باتوں کا خیال رکھے گا:

- ہوادار اور صاف ستھری رہائش گاہ
- عارضی کمروں کیلئے ایسے میٹریل کا استعمال جو جلد آگ نہ پکڑیں۔
- نہانے ،دھونے اور پانی پینے کیلیے صاف اور مناسب پانی کی فراہمی۔
- تمام مزدوروں کیلیئے مناسب جگہ کی موجودگی اور محفوظ ماحولیاتی معیار۔
- صاف ستھرے واش رومز اور نکاسی آب کا مناسب انتظام۔
- خواتین لیبر کیلیئے پردے اور پرائیویسی کا انتظام اور الگ کمروں کا قیام مزید براں خواتین لیبر کی موجودگی کی صورت میں اُنکے لیے علیحدہ ٹوائلٹس رواش رومز کا انتظام۔
- بین الاقوامی معیار کے مطابق ہر دس افراد کیلیئے مطلوبہ ٹوائلٹ کی سہولت کی تعداد ایک ہے۔
- اگر لیبر کیمپ طویل مدت کیلیئے لگایا جانا ہو تو بارشوں رسیلاب کے پانی سے بچنے کیلیئے مناسب انتظامات کا ہونا اور نکاسی آب کی فراہمی بے حد ضروری ہے۔
- ٹوائلٹس اور عارضی رہائش گاہوں میں بجلی کی فراہمی کو یقینی بنایا جائے۔ ۔

سرگرمیاں

۳۔ لیبر کیمپ سے پیدا ہونے والا سالڈ اور لیکوئڈ ویسٹ

مسائل



- تعفن اور بدبو
- صحت کے لیئے نقصان
- ماحولیات کے لیئے نقصان
- مقامی آبادی کے لیئے نقصان
- بیماریاں پیدا کرنے والے بیکٹیریا اور مچھروں کا ذریعہ

حفاظتی اقدامات

- روزمرہ پیدا ہونے والے کوڑا کرکٹ اور کچن کے کوڑا کرکٹ کے لیئے الگ الگ کوڑا دانوں کا انتظام
- میونسپل کمیٹی رکارپوریشن کی جانب سے منتخب کردہ جگہ پر روزانہ کی بنیاد پر کوڑے کو اٹھانے اور تلف کرنے کا مناسب انتظام۔
- عارضی ٹوائلٹس سے پیدا شدہ فضلے اور لیکوئیڈ ویسٹ کو حفظان صحت کے اصولوں کے مطابق ٹھکانے لگانے کا انتظام۔
- فضلے کو ٹھکانے لگانے کے لیئے رہائش گاہ سے کم از کم 500 میٹر دور جگہ کا انتخاب کیا جائے جس کے اردگرد لوگوں کی رہائش نہ ہو۔
- عارضی ٹوائلٹس سے پیدا شدہ فضلے کو ٹھکانے لگانے کے لیئے منتخب کردہ جگہ کے اردگرد باڑ لگائی جائے یا درخت لگا دیے جائیں تا کہ بچے اور دیگر رہائشی داخل نہ ہوں اور مچھر اور بدبو بھی پیدا نہ ہو۔

سرگرمیاں

٤۔ کھانا پکانے کے لئیے ایندھن کی فراہمی

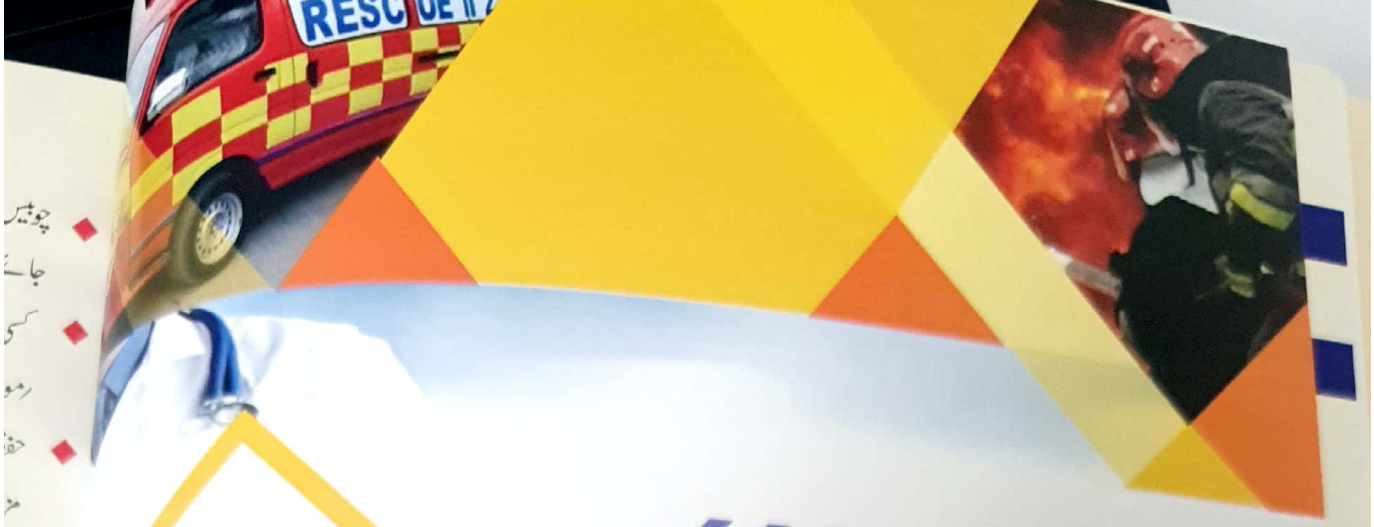
مسائل

- گیس اور دیگر ایندھن سے چلنے والے چولہوں کے پھٹنے کا اندیشہ
- ایندھن کے لیئے لکڑی کے حصول کے لیے درختوں کی کٹائی

حفاظتی اقدامات

ٹھیکیدار کیمپ سائٹس پر درج ذیل سہولیات مہیا کرے گا۔

- لیبر کیمپس میں کھانا پکانے، کمروں کو گرم رکھنے نیز سردیوں میں نہانے اور دھونے کے لیے گرم پانی کے لیے ایندھن کی لکڑی یا دیگر بائیو گیس استعمال کرنے کی حوصلہ شکنی کریں اور ایندھن کیلیے درختوں کی کٹائی نہ کریں۔
- درختوں اور اردگرد جنگلات کی حفاظت کیلیے مزدوروں/لیبر کو آگاہی دی جائے۔
- کھانا پکانے کے لیئے قدرتی گیس یا مٹی کے تیل کے محفوظ چولہے استعمال کیے جائیں۔



سرگرمیاں

۵۔جانوروں /پرندوں کا شکار خرید و فروخت

مسائل

- جنگلی حیات کو خطرات
- ماحولیاتی وسائل کو خطرات

حفاظتی اقدامات

- لیبر/مزدوروں کو گاہی فراہم کی جائے کیونکہ اردگرد موجود کسی بھی قسم کی جنگلی حیات کو نقصان پہنچانا ،ان کے گھونسلوں/ پناہ گاہوں میں کوئی مداخلت کرنا، شکار کرنا یا جانوروں/ پرندوں کو قید کرنا اور خرید و فروخت کرنا، پنجاب وائلڈ لائف (پروٹیکشن ، پریزرویشن، کنزرویشن اینڈ مینجمنٹ ایکٹ 1974) کے مطابق ممنوع اور سزا قابل تعزیر جرم ہے۔

سرگرمیاں

۶۔حفظان صحت کے اصول

مسائل

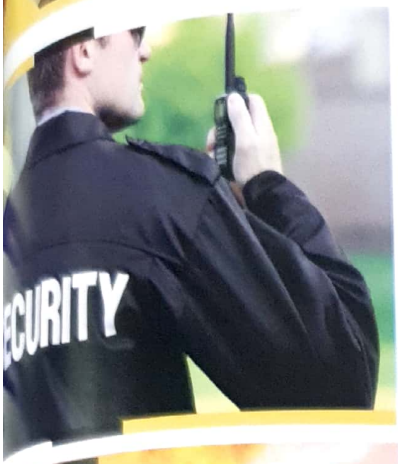
- حفظان صحت کے رہنما اصولوں پر عملدرآمد کرنے کی صورت میں مختلف بیماریاں مثلاً کرونا وائرس ، ملیریا ، ایچ آئی وی ایڈز اور دیگر انفیکشنز کے پھیلنے کا خطرہ

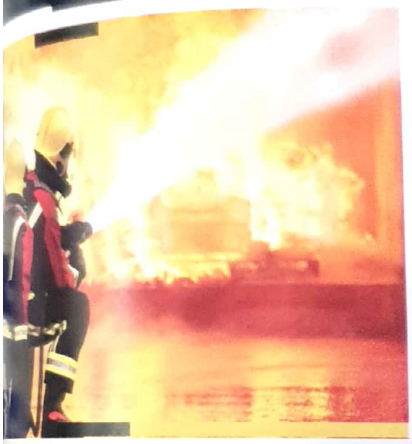
حفاظتی اقدامات

ٹھیکیدار لیبر کیمپس میں درج ذیل انتظامات مہیا کرے گا:

- لیبر کیمپس میں صحت و صفائی کی مناسب سہولیات کی فراہمی
- بیرونی علاقوں سے آنے والے مزدوروں کی صحت کی ابتدائی سکریننگ

- چوبیس گھنٹے لیبر کیمپس میں پر فرسٹ ایڈ بکس کی سہولت موجود ہو۔ کیمپ سائٹس میں ابتدائی طبی امداد سے متعلقہ دواؤں کا موجود ہونا یقینی بنایا جائے۔ اور طویل المدتی کیمپ کی صورت میں کسی ڈسپنسر/ڈاکٹر کا کیمپ میں موجود ہونا چاہیئے۔
- کسی ایمرجنسی کے دوران مزدوروں کے لیے ایمبولینس کی سہولت فراہم کی جائے اور ایمرجنسی سروسز 1122 یا 15 پر کال کرنے کے لیے ٹیلیفون /موبائل کی سہولت مہیا کی جائے ۔
- حفظان صحت کے بہترین اصولوں ، صفائی ستھرائی اور صحت کی دیکھ بھال کے امور کیلیے مزدوروں/لیبر کو تربیت فراہم کی جائے جس میں تمام مزدوروں کی شرکت کو یقینی بنایا جائے۔
- جنسی طور پر منتقل ہونے والی بیماریوں اور ایڈز وغیرہ کے بارے میں مزدوروں کو مکمل معلومات فراہم کی جائیں اور ان بیماریوں سے بچنے کے لیے حفاظتی اصول اپنانے پر زور دیا جائے۔
- مچھروں اور دیگر بیکٹیریا کو پیدا ہونے سے روکنے کیلیئے حفاظتی سپرے لازمی کرائے جائیں۔
- کرونا سے بچنے کے لیئے ابتدائی سکریننگ یقینی بنائیں اور بار بار ہاتھ دھونے پر زور دیں اور علامات ظاہر ہونے پر فوری طور پر دیگر مزدوروں سے آئسولیشن کے مکمل اصولوں پر سختی سے عمل کیا جائے۔
- لیبر کیمپس کے اندر مناسب مقامات پر حفظان صحت کے اصولوں سے متعلقہ پیغامات اور طریقے ڈسپلے کیے جائیں اور تربیتی پروگرام کا اہتمام کیا جائے۔
- قریبی ڈسپنسری/ہیلتھ کلینک/ہسپتال کے رابطہ نمبر وغیرہ واضح مقامات پر آویزاں کئے جائیں۔





سرگرمیاں

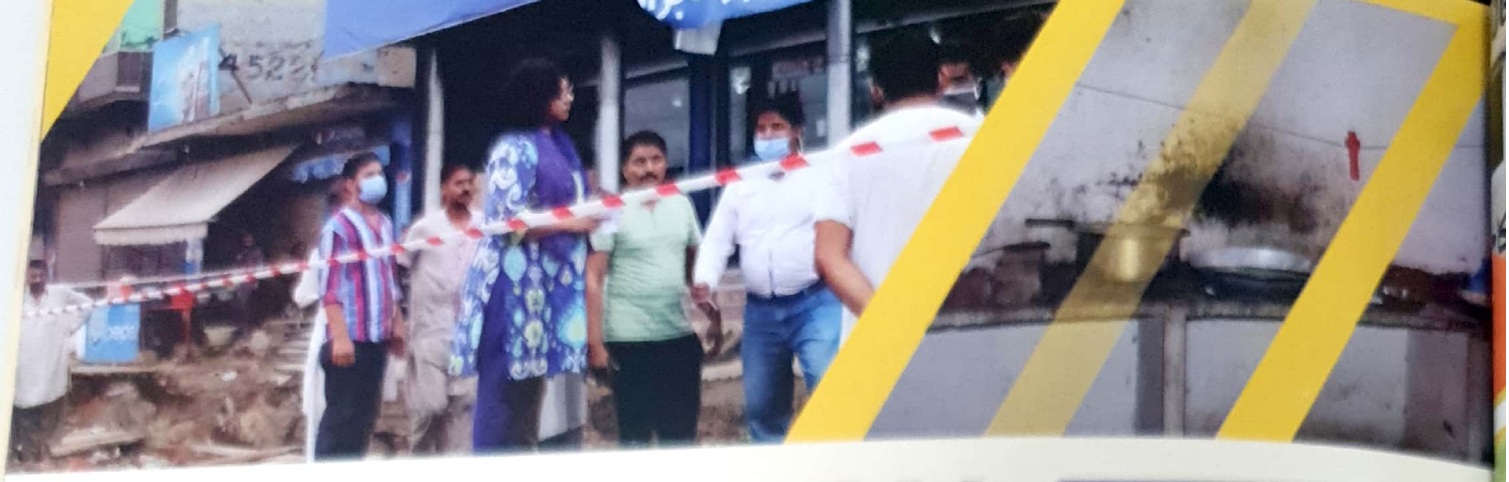
۷۔ سکیورٹی اور حفاظت کی سہولیات

مسائل

- سکیورٹی کے مسائل
- چوری کا خطرہ
- دہشت گردی کا خطرہ
- آگ لگنے کے خطرات

حفاظتی اقدامات

- کیمپ کے گرد حفاظتی باڑ کی فراہمی
- حفاظتی اہلکار (پولیس یا نجی سکیورٹی گارڈ/ہوم گارڈ وغیرہ) کی تعیناتی
- کیمپ میں موجود افراد کی صحیح تعداد اور آمد و رفت کا حساب کتاب رکھنے کے لیے رجسٹر میں اندراج۔
- آگ سے بچاؤ کے لیئے لیبر کیمپ بنانے میں ایسا کوئی میٹیریل استعمال نہ کیا جائے جس سے آگ لگنے کا اندیشہ ہو۔
- بارش، طوفان، سیلاب وغیرہ سے بچنے کیلئے اس بات کو یقینی بنایا جائے کہ کیمپ سائٹ اور عارضی کمرے/رہائش گاہیں محفوظ رہیں۔
- لیبر کیمپس میں آگ بجھانے والا آلات موجود ہوں جن پر انکی آخری معیاد کی تاریخ درج ہو۔ اور سکیورٹی گارڈ یا لیبر وغیرہ میں سے نمائندہ افراد کو آگ بجھانے والے آلہ استعمال کرنے کی تربیت دی جائے۔
- لیبر کیمپ میں واضح مقامات پر ہنگامی/ایمرجنسی رابطہ نمبر نمایاں درج ہوں۔
- ٹھیکیدار، لیبر کے ساتھ ماہانہ میٹنگز میں ایمرجنسی کی صورت میں ہر ایک مزدور کو اسکی ذمہ داریوں اور تربیت سے آگاہ کرے اور اسکی تفصیل متعلقہ کنسلٹنٹ اور میونسپل کمیٹی/کارپوریشن کو فراہم کرے۔ اور کسی بھی قسم کی شکایات ایک رجسٹر میں درج کرے۔



سرگرمیاں

۸۔ حفظان صحت کے اصولوں پر مبنی خوراک (Food Safety)

مسائل

- فوڈ پوائزننگ کا خدشہ
- بیماری کا ڈر

حفاظتی اقدامات

- مزدوروں کو صاف ستھرے اور تازہ کھانے کی فراہمی کو یقینی بنایا جائے۔

سرگرمیاں

۹۔ مذہبی و سماجی میل جول

مسائل

- مذہبی عبادات میں رکاوٹ
- سماجی تعلقات میں دشواری
- سماجی، ثقافتی اور مذہبی خیالات میں شدت پسندی یا لڑائی جھگڑا وغیرہ

حفاظتی اقدامات

- مزدوروں/لیبر کو ان کے مذہب اور فرقے کے مطابق مذہبی عبادات کی سہولیات فراہم کرنا۔
- خواتین لیبر کی موجودگی کی صورت میں ان کے لیے علیحدہ وضو، نماز اور پردے کا اہتمام کیا جائے۔
- تمام مزدوروں کی مذہبی، ثقافتی یا فرقے کی وابستگی سے قطع نظر غیر متعصّبانہ اور برابری کا سلوک کیا جائے۔
- مزدوروں کو تعمیراتی کام کے دوران نماز میں شرکت کرنے یا دیگر عبادات کی اجازت دی جائے اور اس سلسلے میں مذہبی اور سکیورٹی امور کے ذمہ دار مقامی حکام کو تعمیراتی کاموں کے آغاز سے پہلے باضابطہ طور پر آگاہ کیا جائے تاکہ صحت عامہ، معاشرتی اور حفاظتی امور پر موثر نگرانی برقرار رہ سکے۔

سرگرمیاں

10. تعمیراتی کام ختم ہونے کے بعد کی زمہ داریاں

مسائل

- فالتو سامان اور کوڑا کرکٹ کی گندگی

حفاظتی اقدامات

- کیمپ سائٹ کو اصل حالت میں بحال کیا جائے۔
- تعمیراتی کام کے مکمل ہونے پر فریم اور باڑ لگنے والے دروازوں سمیت لیبر کیمپ میں قائم تمام سہولیات کو ایسے ختم کیا جائے کہ وہاں کا کوئی
  رہے۔
- کام کم ہونے کے ساتھ لیبر کیمپ کو مرحلہ وار ختم کیا جائے (پورے کام کی تکمیل کا انتظار نہ کریں)
- لیبر کیمپ کو مسمار کرنے کے دوران شور اور کسی بھی قسم کی آلودگی مثلاً گرد و غبار، آبی آلودگی وغیرہ پھیلانے سے گریز کریں۔
- لیبر کیمپ کو مسمار شدہ ملبہ کو دوبارہ استعمال کرنے اور دوبارہ قابل استعمال کرنے کیلیے کسی لوکل ڈیلر/ٹھیکیدار کی خدمات حاصل کریں۔
- مسمار شدہ ملبہ کو دوبارہ استعمال کرنے اور دوبارہ قابل استعمال کرنے کیلیے کسی لوکل ڈیلر/ٹھیکیدار کی خدمات حاصل کریں۔
- کوڑا کرکٹ اور دوبارہ ناقابل استعمال سامان کو متعلقہ میونسپل کمیٹی/کارپوریشن کی جانب سے مقرر کردہ مقام پر مناسب طریقے سے تلف کیا جائے۔
- لیبر کیمپ کی زمین/جگہ کے مالک کے ساتھ طے شدہ معاہدے کے مطابق کام کریں اور کسی بھی قسم کے اختلاف یا جھگڑے سے گریز کریں۔ اور
  جگہ کو متفقہ منصوبہ کے مطابق اسکے حوالے کیا جائے۔
- لیبر/مزدوروں سے آئندہ کام یا مراعات کے جھوٹے وعدے ہرگز نہ کیے جائیں۔

سرگرمیاں

۱۔تمام قسم کے تعمیراتی سرگرمیاں اور کام

مسائل

- انجریز اور چوٹیں وغیرہ
- نامناسب دیکھ بھال اور بروقت امداد نہ ملنے کے باعث ہلاکت
- دہشت گردی اور سکیورٹی سے متعلق خطرات

حفاظتی اقدامات

- تمام مزدوروں/لیبر سے مقامی/بین الاقوامی معیار کے مطابق مناسب حفاظتی اور قانونی ضوابط کی پیروی کروائی جائے۔
- کام کی جگہ پر اردگرد کے علاقوں میں موجود دہشت گردی اور سکیورٹی کے خطرات کے مطابق حکمت عملی کی بروقت تیاری اور ایک محفوظ وصحت مند ماحول مہیا کیا جائے۔
- مزدوروں/لیبر کیلیے ذاتی حفاظت کے سامان (PPEs) کی فراہمی مثلاً حفاظتی جوتے، ہیلمٹ، ماسک، دستانے، حفاظتی لباس، چشمے، چہرے اور کان کی حفاظت کے سامان وغیرہ کی فراہمی
- تمام مزدوروں/لیبر کو ذاتی حفاظت کے ساز وسامان کے بارے میں مکمل آگاہی اور استعمال کے طریقے کار کے بارے تربیت کا انتظام۔
- اگر تعمیراتی کام ایک ماہ سے زائد عرصہ کیلئے جاری رہنا ہو تو تمام مدت کے لیئے صحت، صفائی اور تربیت یافتہ ماحولیات کی تعیناتی کی جائے جو مزدوروں کی صحت، صفائی اور ماحولیات کے امور کی نگرانی کرے اور انھیں تربیت وآگاہی فراہم کرے۔
- تعمیراتی کاموں کے دوران کسی چوٹ لگنے/انجریز کی صورت میں مزدور/لیبر کے علاج معالجے کی سہولت مہیا کرنا اور بروقت ہسپتال/ڈسپنسری وغیرہ پہچانا ٹھیکیدار کی ذمہ داری ہے۔
- مزید برآں دوران تعمیر تعمیراتی کام کی وجہ سے لگنے والی چوٹ/انجریز کے نتیجے میں ہلاکت ہو جانے کی وجہ سے مزدور/لیبر کی انشورنس اور اس کی بروقت ادائیگی کو یقینی بنایا جائے۔
- ایمرجنسی رابطہ نمبر مثلاً ریسکیو 1122 یا 15 اور دیگر قریبی ہسپتالوں/ڈسپنسری وغیرہ کے نمبر تعمیراتی جگہوں پر واضح درج ہونے چاہیں اور کال کی سہولت فراہم کی جائے۔
- شہری ترقی کے تعمیراتی منصوبہ جات کے اغاز سے قبل صحت، مذہبی امور اور شہری تحفظ/سکیورٹی فراہم کرنے والے مقامی اداروں کو آگاہ رکھا جائے اور اس سلسلے میں متعلقہ میونسپل کمیٹی/کارپوریشن کے تعاون سے موثر حکمت عملی تشکیل دی جائے۔

سرگرمیاں

۲۔تمام قسم کی تعمیراتی سرگرمیاں اور کنسٹرکشن کے کام

مسائل

- 15 سال سے کم عمر بچوں کی صحت اور تعلیم کا نقصان
- 18 سال اور اس سے کم عمر بچوں کی صحت کا نقصان
- حاملہ مزدور عورتوں کی صحت سے متعلقہ خطرات

حفاظتی اقدامات

- دی پنجاب رسٹرکشن آن ایمپلائمنٹ آف چلڈرن ایکٹ 2016 کے مطابق 15 سال سے کم عمر بچوں کو مزدوری یا کسی سرگرمی کے لیئے کام پر نہیں رکھا جا سکتا۔
- ویسٹ پاکستان میٹرنٹی بینیفٹ آرڈیننس 1958 کے مطابق حاملہ خواتین یا ایسی خواتین جنہوں نے چھ ہفتے قبل بچے کو جنم دیا ہو، کو مزدوری یا کسی سرگرمی کے لیئے کام پر نہیں رکھا جا سکتا۔
- دی پنجاب رسٹرکشن آن ایمپلائمنٹ آف چلڈرن ایکٹ 2016 کے مطابق 18 سال اور اس سے کم عمر کے بچوں کہ محنت مزدوری کے ایسے کام کے لیے نھیں رکھا جا سکتا جن میں صحت کو نقصان پہنچنے یا چوٹ لگنے یا کسی کیمیائی زہریلے مادے سے نقصان پہنچنے یا جہاں ہڈی ٹوٹنے کا اندیشہ ہو۔

سرگرمیاں

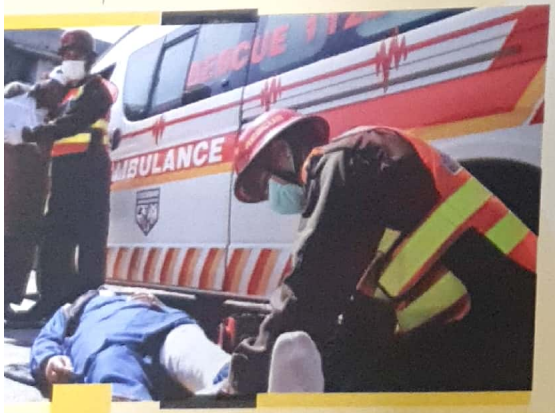
۳۔دوران تعمیر حادثات کا پیش آنا

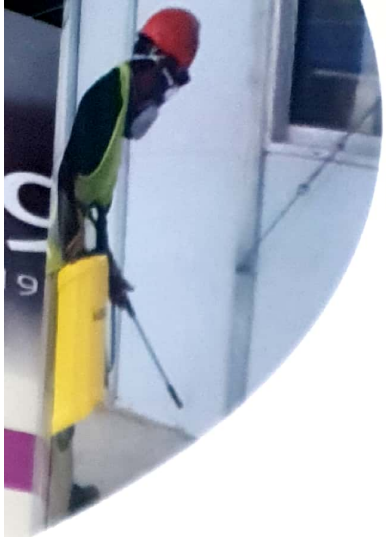
مسائل

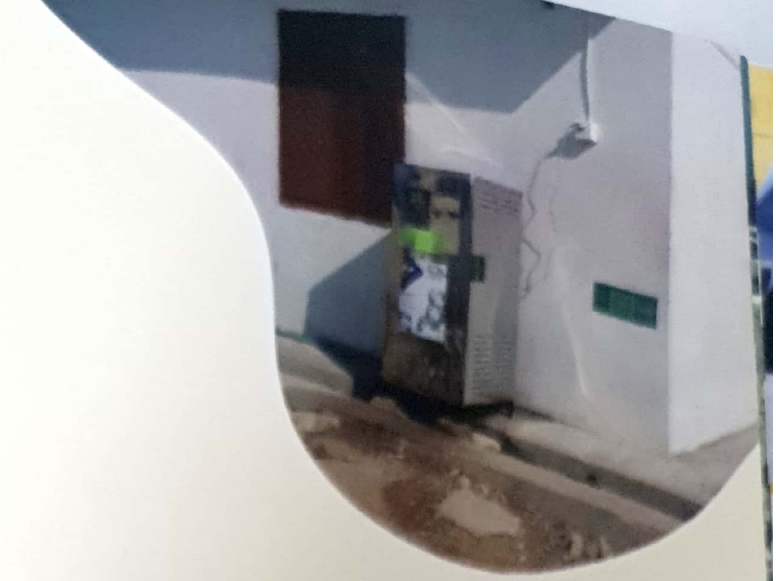
- فوری طبی امداد کی کمی
- اردگرد کے علاقوں میں ابتدائی طبی سہولیات اور صحت عامہ کا فقدان

حفاظتی اقدامات

- تعمیراتی جگہ پر فرسٹ ایڈ باکس کی موجودگی کہ یقینی بنایا جائے اور فرسٹ ایڈ باکس میں تمام ضروری ادویات اور طبی امداد کا ضروری سامان موجود ہو۔
- تعمیراتی کاموں کے دوران پیش آنے والے حادثات بیماریوں اور واقعات کا مکمل ریکارڈ رکھا جائے۔اسی طرح حادثات کی نوعیت و وجوہات کا مکمل ریکارڈ موجود ہو۔
- مزدوروں کی صحت و سکیورٹی سے متعلق ممکنہ خطرات کی بروقت نشاندہی کی جائے خاص کر وہ خطرات جو جان لیوا ثابت ہو سکتے ہیں۔اور ضروری حفاظتی اقدامات بروقت کئے جائیں۔
- تعمیراتی کاموں سے متعلق مشینری چلانے والے ڈرائیوروں کو دوران ڈرائیونگ قواعد وضوابط پر سختی سے عملدرآمد کرانے کے لئے آگاہی فراہم کی جائے۔
- تعمیراتی علاقوں اور سڑکوں کے ساتھ ساتھ روشنی کا معقول انتظام ہو۔







سرگرمیاں

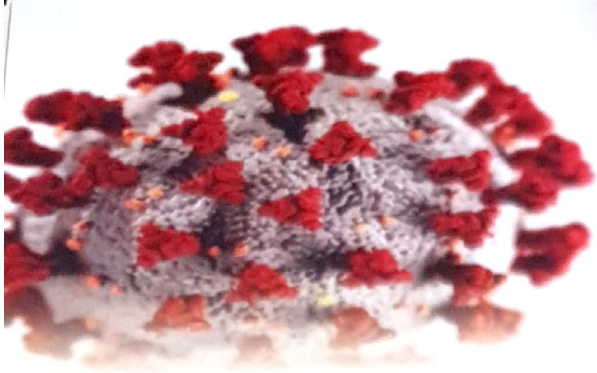
٤.تعمیراتی مقامات پر پانی اور صفائی ستھرائی کی سہولیات اور سالڈ ویسٹ مینجمنٹ

مسائل

- صحت کو خطرہ
- اردگرد علاقے کے لوگوں کے لئے ناگواری کا باعث
- مچھروں اور دیگر بیکٹیریا کی افزائش نسل کا ذریعہ

حفاظتی اقدامات

- تعمیراتی جگہوں پر تمام مزدوروں کے لئے پینے کے لئے صاف ستھرا پانی مہیا کیا جائے۔
- اگر تقریباً 25 مزدور ایک مہینہ کے لئے سارا دن کام کر رہے ہوں تو ان کے لیے تعمیراتی جگہوں پر پورٹ ایبل ٹوائلٹ کا انتظام کیا جائے جو مقامی ڈرینج سسٹم سے ملحق ہوں اور مقامی ڈرینج سسٹم کی غیر موجودگی میں مقامی ندی نالوں وغیرہ سے کم از کم 6 میٹر کے فاصلے پر ہوں۔ مزید برآں پورٹ ایبل ٹوائلٹس کی صفائی ستھرائی کو روزانہ کی بنیاد پر یقینی بنایا جائے۔
- تعمیراتی کاموں کے دوران کھدائی سے حاصل شدہ گارا، مٹی، ریت، کنکریٹ وغیرہ کو تعمیراتی جگہ پر [illegible] دن سے زائد مدت کے لئے کھلا نہ رکھا دیا جائے۔ اور روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی/کارپوریشن کی جانب سے مقرر کردہ جگہ پر مناسب [illegible] ذریعے سے ٹھکانے لگایا جائے۔



COVID-19
CORONAVIRUS DISEASE 2019

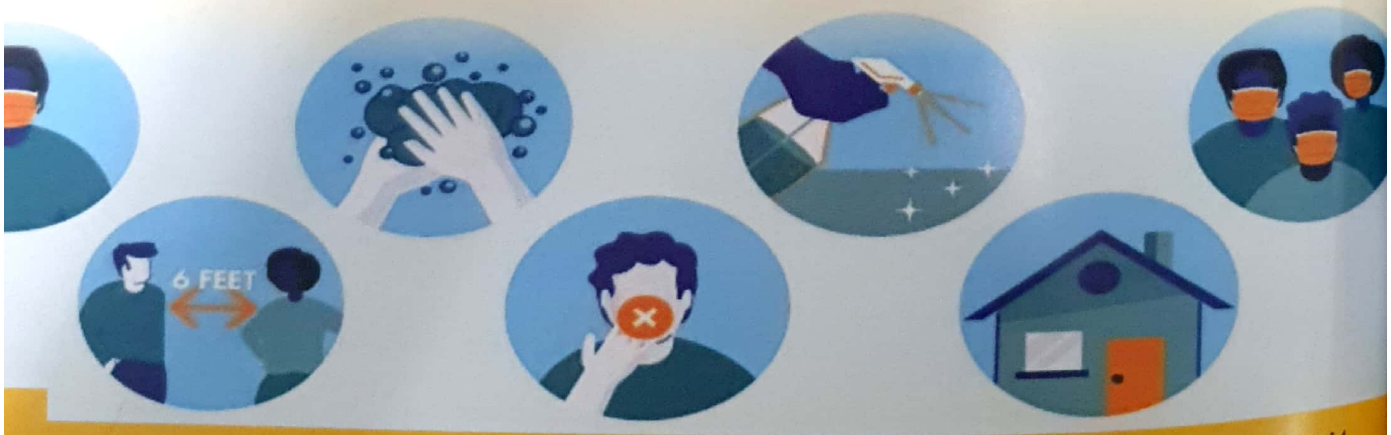
سرگرمیاں

کرونا وائرس کی وبا کے دوران حفاظتی تدابیر

حفاظتی اقدامات

گورنمنٹ آف پنجاب اور ورلڈ بنک کی ھدایات کے مطابق کرونا کی وبا کے دوران درج ذیل حفاظتی اقدامات کی پابندی کروانا کنٹریکٹر کی ذمہ داری ھے :

- کرونا وائرس کی وبا کے دنوں میں کنسٹرکشن سائٹ پر ہاتھ دھونے کیلئے پانی (پورٹ ایبل ہینڈ واشنگ کی سہولت) اور صابن مہیا کیا جائے اور لیبر کو بار بار صابن سے ہاتھ دھونے کی تلقین کی جائے۔
- لیبر کیمپس میں اور کنسٹرکشن سائٹ پر سوشل ڈیسٹینسنگ (6m کا فاصلہ) کے اصولوں کو مدنظر رکھا جائے۔
- کرونا وائرس کی وبا کے دوران اس بات کا خاص خیال رکھا جائے کہ اگر کنسٹرکشن سائٹ پر آبادی میں وبا پھیلی ہوئی ہے تو آبادی اور مقامی لوگوں سے دور رہیں اور کسی قسم کا میل جول نہ رکھیں۔ اسی طرح اگر کوئی مزدور وبا کے علاقے سے روزانہ کی بنیاد پر آ رہا ہے تو اسے باقی لوگوں/مزدوروں سے میل جول سے دور رکھا جائے۔
- اگر کسی مریض میں وائرس کی علامات (خشک کھانسی، نزلہ، زکام، بخار وغیرہ) پائی جائیں تو اسے فوراً دوسرے مزدوروں سے آئسولیٹ کر دیا جائے اور ٹیسٹ کروانے کیلئے کہا جائے۔
- وبا کے دوران کنسٹرکشن سائٹ پر دیگر PPEs کے ساتھ ساتھ مزدوروں کو ماسک لازمی استعمال کرایا جائے۔



تعمیراتی کاموں کے دوران خطرات/حادثات سے بچنے کیلئے سامان برائے ذاتی حفاظت کا خلاصہ

مقصد	تعمیراتی کام	تجویز کردہ سامان برائے ذاتی حفاظت	تصویریں
آنکھوں اور چہرے کی حفاظت/ تحفظ	اڑنے والے ذرات کا استعمال جیسے پگھلی ہوئی دھات مائع کیمیکل، گیسیں، اور بخارات، روشنی کی شعاعیں۔	حفاظتی عینکیں	
سر کی حفاظت/ تحفظ	ایسے تمام کام جن میں گرنے کا خطرہ ہو، بلندی پر کام کرنا، تعمیراتی کام کو سنبھالنے اور دوسری جگہ پر منتقل کرنے والے کام۔	اوپر اور اطراف سے نقصان سے بچاؤ کیلئے پلاسٹک کے ہیلمٹ	
سماعت کی حفاظت/ تحفظ	کھدائی/شور پیدا کرنے والے کام یا بھاری مشینری استعمال کرنے کی وجہ سے شور۔	سماعت کی حفاظت کے آلہ جات جیسے کن پوش یا ایئر پلگ	
پاؤں کی حفاظت/ تحفظ	تمام تعمیراتی کام جن میں چیزوں کا گرنا یا گھمانا، نوکیلی اشیا شامل ہوں۔ گلانے والا یا گرم مائع، کچرے کے ڈھیر سے کچرا اٹھانا۔	ملنے اور گرنے والی اشیاء، مائعات اور کیمیائی مواد سے بچاؤ کیلئے حفاظتی جوتے یا بوٹ	
ہاتھوں کی حفاظت/ تحفظ	جسمانی صحت کیلئے نقصان دہ سامان جیسے کچرے کو سنبھالنا، ایسے کام جس میں کاٹ یا گہرے زخم لگنے کا اندیشہ ہو، ارتعاش، بہت زیادہ درجہ حرارت۔	ربڑ یا مصنوعی مواد (نیوروپین)، چمڑا، سٹیل، غیر موصل مواد سے بنے گلوز	
تحفظ تنفس	دھول، دھند، شعلے، گیسیں، دھواں، بخارات	ایک جگہ سے دوسری جگہ لے جانے والے یا ایک ہی جگہ پڑے مواد کی فراہمی تعمیراتی جگہ پر بچاؤ کا سامان	
	آکسیجن کی کمی	چہرے کے ماسک جن میں دھول ہٹانے اور ہوا کو صاف رکھنے کیلئے (کیمیائی مواد، دھند، بخارات اور گیسوں سے) مناسب فلٹر لگے ہوں	 
جسم / ٹانگوں کی حفاظت/ تحفظ	تمام کام جن میں شدید درجہ حرارت، نقصان دہ مواد، حیاتیاتی ایجنٹ، چھوٹے یا گہرے زخم لگنے کا اندیشہ ہو	مناسب میٹریل سے بنے غیر موصل کپڑے، ایپرن وغیرہ	
اونچائی پر کام کرتے ہوئے حفاظت	تمام تعمیراتی کام جو 4 فٹ یا اس سے زیادہ کی اونچائی پر کیے جانے ہوں بشمول سٹریٹ لائٹس وغیرہ	ہیلمٹ، حفاظتی عینکیں، [illegible] کے گلوز اور ربڑ کے بوٹ	
اونچائی پر کام کرتے ہوئے حفاظت	تمام تعمیراتی کام جو 4 فٹ یا اس سے زائد اونچائی پر مسلسل ایک دن کیلئے کیے جانے ہوں	اینکر، بیلٹ، رسی، کنیکٹر، [illegible] جگہ اور ایک ساتھی فرد	

Summary of Recommended Personal Protective Equipment According to Hazard

Objective	Workplace Hazards	Suggested PPE	Pictures
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 multi-gas personal monitors, if available.	
	Oxygen deficiency	Portable or supplied air (fixed	
Body/leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and	Insulating clothing, body suits, aprons etc.	
Working at *height	Rehabilitation Projects	Helmet, Safety glasses,	
	New Construction Projects	Anchor, belt, lanyard,	

*In general, use of PPEs is required for any height of 4 ft or more. *Ref: OSHA standards*

(3) مقامی آبادی/دکانداروں اور رہائشیوں کی صحت، ماحولیات اور سماجیات سے متعلق رہنما اصول وحفاظتی تدابیر

سرگرمیاں

۱. تعمیراتی کاموں کے لئے منتخب کردہ مقام/ جگہ پر کام کا آغاز

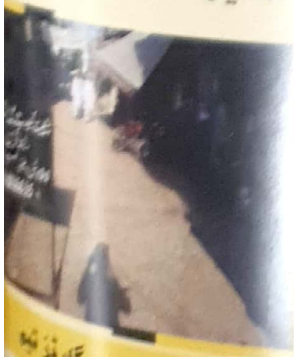
مسائل

- مقامی آبادی/رہائشیوں کیلئے تعمیراتی کام کی عدم آگاہی
- لیبر/مزدوروں کے داخلے سے رہائشی عورتوں کے پردے اور پرائیویسی کے مسائل
- مقامی آبادی کے ثقافتی، سماجی، مذہبی ورثہ، اور تاریخی مقامات/عمارتوں کو نقصان

حفاظتی اقدامات

ٹھیکیدار کو چاہئے کہ:

- متعلقہ میونسپل کمیٹی کے انوائرنمنٹ اینڈ سوشل فوکل پرسن (ز) منتخب کردہ اور متعلقہ ریجنل آفس میں موجود ڈپٹی پروگرام آفیسر (انوائرنمنٹ اینڈ سوشل سیف گارڈز) کی موجودگی میں مقامی آبادی/رہائشیوں اور دکانداروں کو تعمیراتی کام کے آغاز سے قبل تعمیراتی کام کی نوعیت، اغراض ومقاصد اور تکمیل کی معینہ مدت کے بارے میں مکمل آگاہی فراہم کرے۔
- تعمیراتی کام کے دوران پیش آنے والے ممکنہ سماجی اور ماحولیاتی مسائل اور ان کے مطابق حفاظتی اقدامات کے بارے میں مقامی رہائشیوں/دکانداروں کو کام کے آغاز سے قبل مکمل آگاہی دی جائے۔
- تعمیراتی کام کے آغاز سے پہلے مقامی رہائشیوں اور دکانداروں کو تعمیراتی کاموں کی وجہ سے سماجی/ماحولیاتی مسائل کی نشاندہی/شکایات/تجاویز کیلئے مندرجہ ذیل رابطہ نمبرز کے بارے میں مکمل آگاہی فراہم کی جائے۔
  - (a) ٹھیکیدار کا موبائل/ٹیلیفون نمبر
  - (b) متعلقہ میونسپل کمیٹی/کارپوریشن کے فوکل پرسن (ز) کے رابطہ نمبرز
  - (c) متعلقہ (PCP) ریجنل آفس میں تعینات ڈپٹی پروگرام آفیسر (ESSs) کے رابطہ نمبرز
- تعمیراتی کام کے آغاز سے پہلے تعمیراتی مقام/جگہ کو فیتہ کی مدد سے باقی علاقہ سے الگ کر دیا جائے۔



تعمیراتی جگہ/مقام پر واضح بورڈ نصب کر دیئے جائیں، جن پر درج ذیل پیغامات/احکامات لکھے ہوں:

(a) تعمیراتی کام کی نوعیت

(b) ٹریفک میں رکاوٹ کی صورت میں متبادل راستے کا نشان اور عارضی رکاوٹ کا پیغام

(c) ایمرجنسی اور شکایت کیلئے رابطہ نمبرز

(d) (PMDFC) کی جانب سے جاری کردہ سماجی و ماحولیاتی پیغامات پر مبنی پوسٹرز۔

تعمیراتی کام کی جگہ کے ارد گرد 100 میٹر تک کی حدود میں موجود ثقافتی، سماجی، مذہبی ورثہ، تاریخی عمارتوں اور مذہبی مقامات جیسے قبرستان، مساجد، مندر، گرجا گھروں وغیرہ کو کسی قسم کا نقصان نہ پہنچایا جائے اور ان کی حدود میں کوڑا کرکٹ ڈالنے یا فالتو پانی چھوڑنے سے گریز کیا جائے۔ مزید برآں کھدائی کے دوران کسی نئے آثارِ قدیمہ ملنے کی صورت میں متعلقہ مقامی محکمے سے رجوع کیا جائے اور کھدائی کا کام بند کر کے تعمیراتی کام روک دیا جائے۔

سرگرمیاں

2- کھدائی کی جگہ اور اس سے متعلقہ کام اور نالوں کی صفائی اور اس سے حاصل شدہ بھل وغیرہ

مسائل

- کھدائی سے حاصل شدہ مٹی/کنکر کے ڈھیر (Debris) سے رہائشیوں کی آمدورفت اور ٹریفک میں رکاوٹ
- مقامی رہائشیوں کیلئے ناگواری کا باعث
- مچھروں اور دیگر بیماری پھیلانے والے جراثیم کی افزائش کا ذریعہ
- کھدائی کی جگہ پر گرنے اور حادثات کے خطرات

حفاظتی اقدامات

- تعمیر کے دوران کھدائی کے تمام مقامات کے اردگرد حفاظتی ٹیپ / پٹی لگائی جائے اور کھدائی کی جگہ کو عارضی طور پر بند کر دیا جائے جس کے باہر اس جگہ سے دور رہنے کیلئے واضح پیغامات لکھے ہوں۔
- کھدائی سے حاصل شدہ مٹی / کنکر / پتھر وغیرہ کو ایک دن سے زیادہ اس جگہ پر موجود نہ رہنے دیا جائے بلکہ روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی / کارپوریشن کی منتخب کردہ جگہ پر محفوظ طریقے سے ٹھکانے لگایا جائے۔
- نالوں کی صفائی سے حاصل شدہ بھل / ریت وغیرہ کو ایک دن سے زیادہ اس جگہ پر موجود نہ رہنے دیا جائے بلکہ روزانہ کی بنیاد پر اٹھوایا جائے اور بھل کو ایک جگہ سے دوسری جگہ منتقلی کے دوران ٹریکٹر / ٹرالی کو ترپال کی مدد سے ڈھانپ کر لے جایا جائے۔

سرگرمیاں

3-تعمیراتی مشینری / تعمیراتی مٹیریل اور تعمیراتی کاموں کی وجہ سے عارضی بندش

مسائل

- ٹریفک میں رکاوٹ۔

حفاظتی اقدامات

- ٹریفک میں ممکنہ رکاوٹ کے پیش نظر متبادل راستے کا انتخاب اور اس کی نشاندہی کیلئے پیغامات واضح درج کیے جائیں۔
- ٹریفک کونز (cones) کی مدد سے رکاوٹ والی جگہ کو الگ کر دیا جائے تاکہ حادثات سے بچا جا سکے۔
- ٹریفک میں زیادہ دنوں تک مسلسل رکاوٹ کی صورت میں مقامی ٹریفک پولیس کو آگاہ کیا جائے اور ان کے ساتھ مل کر ٹریفک مینجمنٹ پلان کو تشکیل دیا جائے جس کو واضح مقام پر نصب کیا جائے اور مقامی آبادی / رہائشیوں کو اس کے بارے میں مکمل آگاہی دی جائے۔

سرگرمیاں

4-تعمیراتی کاموں کی وجہ سے راستوں میں عارضی رکاوٹ اور زمین کا عارضی حصول

مسائل

- روزمرہ معمولات اور کاموں میں رکاوٹ
- رہائشی خواتین کیلئے آنے جانے میں رکاوٹ
- دکانداروں کے دکانوں کے آگے رکاوٹیں اور گاہکوں کیلئے مشکلات
- مستقل وعارضی سٹالز لگا کر بیچنے والے چھوٹے بڑے مستقل دکانداروں کا گاہک کم ہو جانے کی وجہ سے مالی نقصان

حفاظتی اقدامات

- تعمیراتی علاقے میں اردگرد موجود تمام چھوٹی بڑی دکانوں، ٹھیلوں، عارضی خوانچہ فروشوں اور گھروں کا مکمل سروے (تعداد اور مالی حیثیت وغیرہ) او
ان پر ممکنہ سماجی اور ماحولیاتی اثرات کا جائزہ لے کر ایک تفصیلی رپورٹ اور متعلقہ پلان میونسپل کمیٹی/کارپوریشن کے دفتر میں موجود ہونی چاہئے
جو کہ فوکل پرسنز، متعلقہ علاقائی آفس میں موجود ڈپٹی پروگرام آفیسر (ESSs) کے ساتھ تعمیراتی کاموں کی مالیت کا اندازہ لگائے وقت تیار ک
جائیگی۔ اس رپورٹ اور پلان میں موجود سماجی اور ماحولیاتی مسائل کے حل کیلئے مختص رقم اور ان کا صحیح طریقے سے استعمال ٹھیکیدار کے کنٹریکٹ
حصہ ہوگا۔
- رہائشیوں کیلئے آنے جانے اور دکانوں/گھروں تک رسائی کے لیے متبادل راستے مہیا کرنا ٹھیکیدار کی ذمہ داری ہے۔
- دکانوں/تھڑوں/ٹھیلوں وغیرہ کے باہر کسی بھی قسم کے نقصان یا توڑ پھوڑ کی صورت میں ٹھیکیدار طے شدہ ضوابط کے مطابق اس کی قیمت متاثرہ لوگوں
ادا کرے گا۔
- لیبر/مزدور کو تربیت دی جائے کہ وہ اردگرد رہائشی عورتوں اور بچوں کے آنے جانے میں کوئی رکاوٹ نہ بنیں اور رہائشیوں کے ساتھ بلاضرورت کو
میل جول نہ رکھیں۔
- تعمیراتی کیمپ لگانے، تعمیراتی کام کرنے یا مشینری اور تعمیراتی سامان رکھنے کے لیئے عارضی طور پر حاصل کی گئی زمین کا کرایہ مالک مکان کو وقت
پر ادا کی جائے گا۔ اور تحریری معاہدے کی صورت میں ٹھیکیدار تمام قواعد وضوابط کا پابند ہوگا۔
- تعمیراتی کاموں/کیمپ وغیرہ لگانے کے لیئے عارضی زمین حاصل کرنے کے لئے مقامی رہائشیوں سے مشاورت اور دنوں کے حساب سے کرایہ اور
اس کا مکمل طریقہ کار وضع کر کے باقاعدہ لکھا جائے گا۔ اور خلاف ورزی کی صورت میں ٹھیکیدار ذمہ دار ہوگا۔

سرگرمیاں

۵۔تعمیراتی کام اور ہیوی مشیری کا استعمال

مسائل

- شور غل
- پانی کی آلودگی
- ہوائی آلودگی
- دیگر ماحولیاتی مسائل

حفاظتی اقدامات

- تعمیراتی علاقے میں موجود ہسپتالوں، سکولوں/کالجوں وغیرہ اور رہائشی گھروں/دکانوں کی تمام تفصیلات کی رپورٹ متعلقہ میونسپل کمیٹی کے دفتر میں موجود ہونی چاہیئے جو کہ ٹھیکیدار کے کنٹریکٹ کا حصہ ہوگی۔ اور ٹھیکیدار ان تفصیلات کے مطابق ایسا پلان ترتیب دے گا جس سے اردگرد عمارتوں/رہائشیوں اور دکانداروں کو کم سے کم پریشانی کا سامنا کرنا پڑے مثلاً زیادہ شور پیدا کرنے والے کام دن کے اس حصے میں کئے جائیں جب ہسپتالوں، اور سکولوں/کالجوں وغیرہ کے مصروف اوقات کار نہ ہوں اور ایسے کام جن کی وجہ سے راستوں کی عارضی بندش ضروری ہوں وہ رات کو کیئے جائیں جب رہائشیوں کی آمدورفت نہ ہو۔
- تعمیراتی کاموں کے دوران پیدا شدہ فاضل پانی یا پورٹیبل ٹوائلٹس کا پانی/فضلہ وغیرہ کا محفوظ اور مناسب طریقے سے ٹھکانے لگانے کا بندوبست کیا جائے اور فاضل پانی کو پینے کے صاف پانی کے ساتھ شامل ہونے سے بچانے کا ہر ممکن قدم اٹھایا جائے۔
- واٹر سپلائی کی سکیموں یا ایسی تمام کام جن کی وجہ سے رہائشیوں کو پانی یا سیوریج وغیرہ میں عارضی بندش کا سامنا کرنا پڑ سکتا ہو۔ ایسے تمام کاموں کے آغاز سے پہلے رہائشیوں کو پیشگی اطلاع دی جائے اور متبادل انتظامات کا خاطر خواہ انتظام کیا جائے۔
- تعمیراتی کاموں کی وجہ سے درختوں کی کٹائی سے ہر حال میں گریز کیا جائے اور ناگزیر صورت حال میں ایک درخت کی کٹائی کے متبادل کے طور پر چار درخت لگانا ضروری ہیں۔
- تعمیراتی جگہ پر پیدا ہونے والے کوڑا کرکٹ کو ٹھکانے لگانے کیلئے ڈسٹ بن لگائے جائیں اور ان کو روزانہ کی بنیاد پر متعلقہ میونسپل کمیٹی کی طرف سے مقرر کردہ مقام پر ٹھکانے لگایا جائے۔
- کوڑا کرکٹ اور فاضل پانی اردگرد موجود فصلوں اور ندی نالوں میں پھینکنے سے گریز کریں۔
- گرد و غبار اور ہوائی آلودگی کی صورت میں پانی کا باقاعدہ چھڑکاؤ کریں۔
- تعمیراتی کام کی مدت اور نوعیت کے مطابق کام کے آغاز سے پہلے، کام کے دوران اور کام کے بعد شور کی آلودگی، ہوائی آلودگی اور آبی آلودگی کے نمونہ جات حاصل کر کے ان کی جانچ پڑتال کرانا ٹھیکیدار کی ذمہ داری ہے۔ اس سلسلے میں ریجنل آفس میں موجود ڈپٹی پروگرام آفیسر (ESSs) سے مزید رہنمائی حاصل کریں۔
- تعمیراتی کام مکمل ہو جانے کے بعد علاقے کی صفائی ستھرائی اور ماحولیاتی خوبصورتی کا خاص خیال رکھیں اور پہلے سے بہتر حالت میں چھوڑیں۔

* سپریم کورٹ آف پاکستان کے سوموٹو کیس نمبر 25 بمطابق 2009 حوالہ نمبر "کٹنگ آف ٹریز فار کینال وائیڈننگ پراجیکٹ لاہور" تعمیراتی کاموں کے دوران ہر ایک درخت کی کٹائی کے متبادل چار درخت لگائے جائیں گے۔

ترقیاتی منصوبوں کی تعمیرو مرمت کے دوران کام کرنے والے
مزدوروں ،ورکرز، (بشمول خواتین لیبر/ ورکرز) کی صحت، حفا
ظت ،اور ماحول کے لئے معیاری اصول وضوابط درج ذیل پالیسیز،
قوانین اور نوٹیفیکیشنز کا تجزیہ کر کے تجویز کئے گئے ہیں۔

- The Punjab Occupational Health & Safety Act, 2019
- General Environment, Health & Safety (EHS) Guidelines by International Finance Corporation (IFC), World Bank
- International Labour Standards of International Labour Organization (ILO)
- Punjab Tehsil/Town Municipal Administration (Works) Rules 2003 (Amendments 2016)
- The Punjab Restriction on Employment of Children Act , 2016
- The West Pakistan Maternity Benefit Ordinance , 1958
- ESF/Safeguards Interim Note: COVID-19 Considerations in Construction / Civil Works Projects - World Bank Guidelines
- Health & safety SOPs for Construction Workers/Sector for COVID 19
- Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1974