Local Government & Community Development Department

Punjab Cities Program

Improvement and Rehabilitation of of Railway Crossing to Canal Road & Club Road to Chungi No.6 and People Colony Road Vehari

Package-IV

PC-I

Estimated Cost PKR 158.728 Million

February 2023

Municipal Committee, Vehari

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Punjab Cities Program

PC-I Form for Improvement and Rehabilitation of of Railway Crossing to Canal Road & Club Road to Chungi No.6 and People Colony Road in MC Vehari (Package – IV)

Table of contents

PC-I FORM
for
Improvement and Rehabilitation of of Railway Crossing to Canal Road & Club Road to Chungi No.6 and People Colony Road in MC Vehari (Package – IV)

Project Serial Number

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

1. Name of the project	**Punjab Cities Program** **Improvement and Rehabilitation of of Railway Crossing to Canal Road & Club Road to Chungi No.6 and People Colony Road in MC Vehari (Package – IV)**
2.Location	Vehari city is located at 100 km (62 miles) distance from the historical city of Multan in the east at old Multan-Delhi Road and is the headquarters of Vehari District. It is located at 300 02' N and 720 21'E and connected with all cities through rail and road. Location map of the city is attached in **Annexure-A**
3. Authorities responsible for	
i- Sponsoring	Government of the Punjab (through World Bank funding)
ii- Execution	Municipal Committee, Vehari
iii- Operation and Maintenance	Municipal Committee, Vehari
iv-Concerned Provincial Department	Local Government and Community Development Department Punjab
4a.Plan Provision	
i. If the project is included in medium term/five year plan, specify actual allocation	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.

Total loan from World Bank	USD 200.00 million
Component-1 Infrastructure development (PforR)	USD 180.00 million USD
Component-2 Technical Assistance	USD 20.00 million
MCs share (20% of PforR component) equivalent to:	USD 36.00 million
Total Program cost	USD 236.00 million

		Component-2 i-e Technical Assistance component of Program costing USD 20.00 million is meant for management cost of the Program and capacity building of MCs & Government Departments and 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 1369.90 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.1369.90 million under ADP 2022-23 General Serial No 1769 for Component-2 of the Program i-e Technical Assistance 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 Vehari 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 up gradation 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

<table>
<tr><td></td><td>of the city and the surrounding areas, is to improve the roads, chowks and important cross roads</td></tr>
<tr><td>ii. Description of the subproject-</td><td>The project comprises of improvement of 02 Nos damaged roads with total length of 2.71 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>6</td><td>P7-Railway Crossing to Canal Road & Club Road to Chungi No.6 Chowk</td><td>Multan Road Railway Crossing, Canal Road to Club Road (Old NADRA Office Road)</td><td>• Geometric Improvement
• Rehabilitation of Existing Pavement Structure
• Pavement Marking
• Street Lighting
• Improvement of drainage system</td></tr>
<tr><td>7</td><td>P8-People Colony Road</td><td>Imam Bargah to Tanki Chowk Peoples Colony</td><td>• Geometric Improvement
• Rehabilitation of Existing Pavement Structure
• Pavement Marking
• Street Lighting
• Improvement of drainage system</td></tr>
<tr><td colspan="4"></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>• Municipal Committee Vehari 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>
</table>

7- Capital Cost of Project

The summary of the works included in the project is given below;

S. No	Name of road	Cost (PKR million)
1	P7-Railway Crossing to Canal Road & Club Road to Chungi No.6 Chowk	31.660
2	P8-People Colony Road	63.452
3	Drainage System	19.074
4	Electrical Works	33.486
5	Environment & Social Mitigation Cost	0.671
	Total	**148.344**
6	Contingencies @2%	2.966
7	Punjab Sales Tax @5%	7.417
	Grand Total	**158.728**

See **Annexure-B** for details

i- Indicate date of estimation of the project cost

The project estimates have been framed during the month of March, 2023

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 Vehari 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	P7-Railway Crossing to Canal Road & Club Road to Chungi No.6 Chowk	100%
2	P8-People Colony 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	P7-Railway Crossing to Canal Road & Club Road to Chungi No.6 Chowk	31.660	31.660
2	P8-People Colony Road	63.452	63.452
3	Drainage System	19.074	19.074
4	Electrical Works	33.486	33.486
5	Environment and Social Mitigation Cost	0.671	0.671
	Total work outlay	**148.344**	**148.344**
6	PST, Contingencies, Escalation	10.384	10.384
	Total project cost (Millions)	**158.728**	**158.728**

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

The roads & chowks are already being repaired and maintained by the Municipal Committee Vehari out of its own financial resources. No additional cost will be required after completion of the improvement and up gradation 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.
- Municipal Committee Vehari 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 MC 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 Vehari city. Projected traffic of 2 project roads for 10 year is 53.5 million. Project roads of MC Vehari 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 MC 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)
1	P7-Railway Crossing to Canal Road & Club Road to Chungi No.6 Chowk	Multan Road Railway Crossing, Canal Road to Club Road (Old NADRA Office Road)	Asphalt Concrete	25ft (varies)	Single	16 ft (varies)	1.21
2	P8-People Colony Road	Imam Bargah to Tanki Chowk Peoples Colony	Asphalt Concrete	50 ft (Varies) (Dual) 49 ft (Varies) (Single)	Single and Dual	15 ft (Dual) 15 ft (Varies) (Single)	1.48

2. Roads and chowk are designed for 10-year life.
3. These roads will carry out the 53.5 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.	

<table>
<tr><td>b) Equity</td><td>A. Loan/grant to MC
The amount of loan converted to grant to Vehari Unit will be PKR. 126.982 million. The financing of the project will be as given below:
<table><tr><td>Grant to Unit for the year 2022-2023 (80% of cost of PC-I)</td><td>PKR 126.982 million</td></tr><tr><td>20% Co-finance by MC (20% of the cost of PC-I)</td><td>PKR 31.745 million</td></tr><tr><td>Total available funds</td><td>PKR 158.728 million</td></tr></table>B. Project Cost PKR 158.728 million

*The loan is from World Bank to Government of Pakistan/Punjab which will trickle down to Vehari Unit as grant.</td></tr>
<tr><td>c) Grants</td><td>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 from Government of Punjab.</td></tr>
<tr><td>d) Weighted cost of capital</td><td>Nil</td></tr>
<tr><td colspan="2">11-Project benefits and analysis</td></tr>
<tr><td>i.Financial:
Income to the project with assumption</td><td>• The project comprises of improvement of roads, chowks and cross roads in the city.
• Vehari 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 unit will meet the cost of repair and maintenance out of its own resources. The project economic analysis is given as Annexure-C.</td></tr>
<tr><td>ii.Social benefits to the target group</td><td>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</td></tr>
</table>

<table>
<tr><td>iii.Environmental Impact negative/positive</td><td></td><td>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 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. E&S Screening & Involuntary resettlement checklists and Environment & Social Mitigation plan will also be the part of the bidding documents. The Environment, Health and Safety SOPs for labor/workers are provided as Annexure E (B).</td></tr>
<tr><td>iv.Quantifiable project outputs</td><td></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></td><td>The unit cost analysis is produced below;
<table><tr><td>Project capital cost</td><td>PKR 158.728 million</td></tr><tr><td>Population of the city in year 2023</td><td>145,590 persons</td></tr><tr><td>Unit capital cost per capita</td><td>PKR 1090</td></tr></table>
• Unit R&M cost: – The Repair & maintenance cost is already being borne by Vehari 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></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.</td></tr>
</table>

		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 • 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*** Vehari 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 March 23 and to be completed by June 2023 with project implementation period of 4 months.
b) Item wise/year wise schedule in line chart		The Gant 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 Municipal Committee Vehari 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 MC. • The procurement of works and goods will be done by Procurement Committee of Vehari 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	Socialist	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.

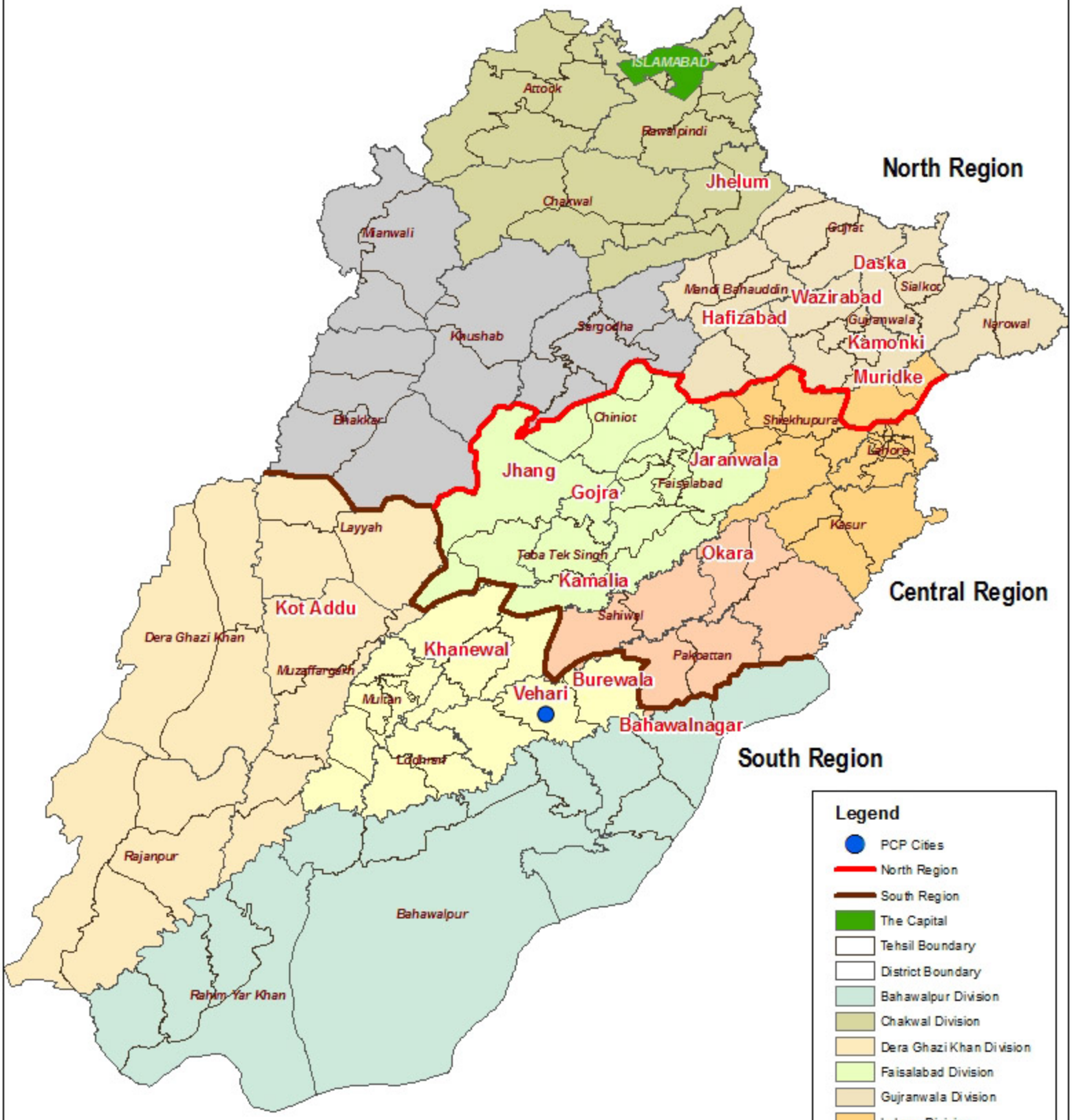
Prepared by	JERS Consultancy (Pvt) Ltd	Signatures	
Checked by	Municipal Officer (Infrastructure) Municipal Committee Vehari	Signatures	
	Chief Officer Municipal Committee Vehari	Signatures	

	Administrator Municipal Committee Vehari	Signatures	
Vetted by	Senior Program Officer PMDFC	Signatures	

Annexure-A
Location Map

Location Map
(Punjab Cities Program)

ANNEXURE - A



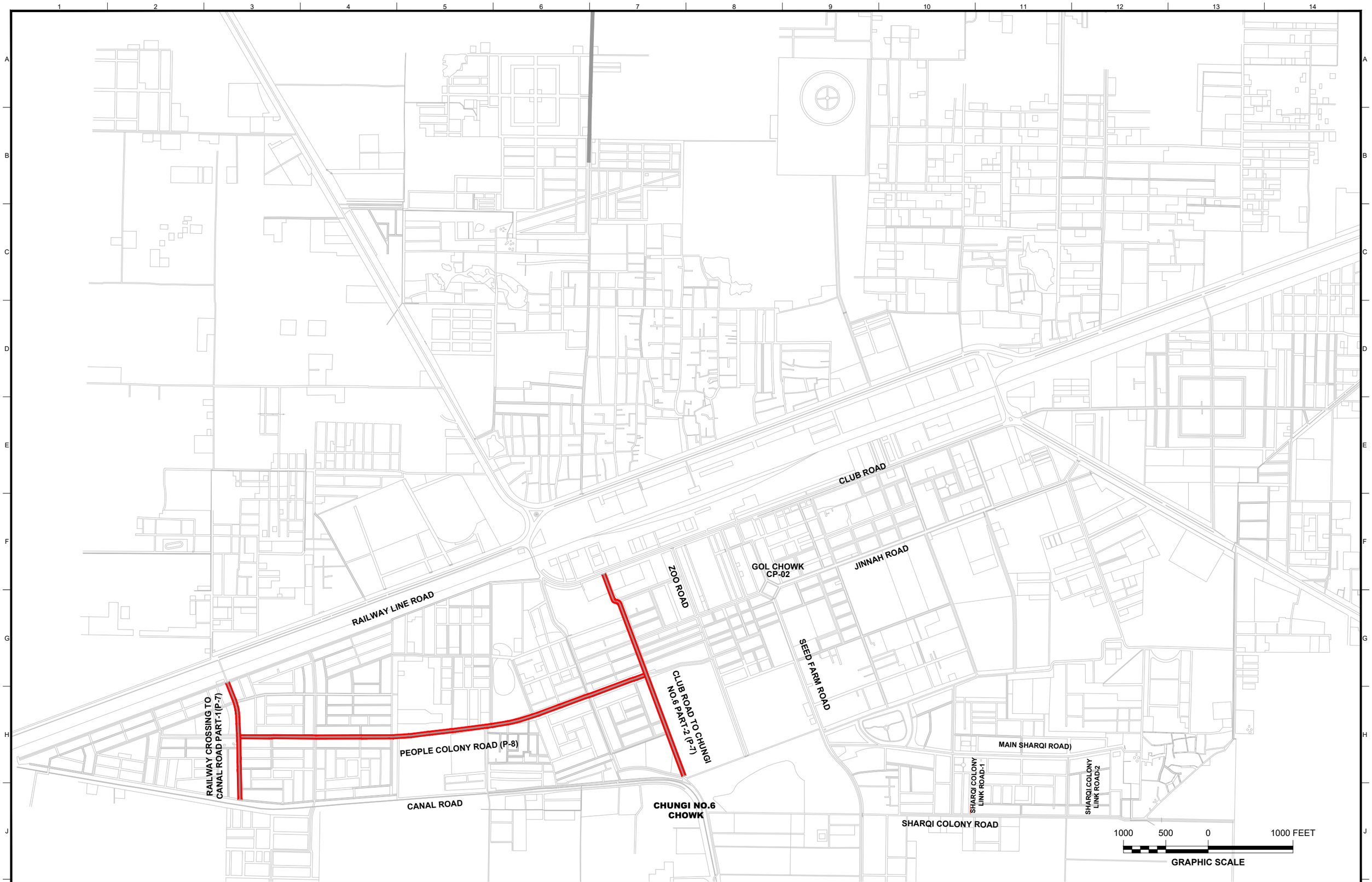
Legend

- PCP Cities
- North Region
- South Region
- The Capital
- Tehsil Boundary
- District Boundary
- Bahawalpur Division
- Chakwal Division
- Dera Ghazi Khan Division
- Faisalabad Division
- Gujranwala Division
- Lahore Division
- Multan Division
- Sahiwal Division
- Sargodha Division

0 45 90 180 Kilometers

HELP BUILD PMDFC HEALTHY CITIES

Local Government & Community Development Department, Governmnet of The Punjab



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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Fax: +92 42 35113125
E-mail: info@jers.com.pk, mail@jers.com.pk
Web: http://www.jers.com.pk

PROJECT:

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

DRAWING TITLE:

PROJECT KEY PLAN (VEHARI)

REV.	DATE	DESCRIPTION
-	-	-

DRAWN BY: Adeel
CHECKED BY: Umer
DATE: DEC,2022

DRAWING NO: **SV-01**
SCALE: UNIT=FEET 1"=1000'
SHEET: -
JOB NO: 488-01

Annexure-B

Rough Cost Estimate

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

ROAD WORKS

MC VEHARI

DETAILED COST ESTIMATE

SUMMARY

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	95,112,787
2	STORMWATER DRAINAGE SYSTEM	19,074,427
3	ELECTRICAL WORKS	33,485,733
4	ENVIRONMENT AND SOCIAL MITIGATION COST	671,045
	Total Amount (Rs.)	**148,343,992**
	Contingencies @ 2%	2,966,880
	PRA Charges @ 5%	7,417,200
	Total Amount. Rs.	**158,728,071**

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

MC VEHARI

DETAILED COST ESTIMATE

SUMMARY

Sr. No.	Description	Amount (Rs.)
1	**ROAD WORKS**	
1.1	P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1 (0.43 km)	12,028,284
1.2	P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2 (0.79 km)	19,631,936
1.3	P-8 PEOPLE COLONY ROAD (1.50 km)	63,452,567
	1) Total Amount. Rs.	**95,112,787**
2	**STORMWATER DRAINAGE SYSTEM**	
2.7	P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1	945,642
2.8	P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2	1,556,597
2.9	P-8 PEOPLE COLONY ROAD	16,572,189
	2) Total Amount. Rs.	**19,074,427**
3	**ELECTRICAL WORKS**	
3.7	P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1	5,595,302
3.8	P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2	9,495,680
3.9	P-8 PEOPLE COLONY ROAD	18,394,751
	3) Total Amount. Rs.	**33,485,733**
4	**ENVIRONMENT AND SOCIAL MITIGATION COST**	**671,045**
	Total Amount (Rs.) "1+2+3+4"	**148,343,992**
	Say Millions	**148.344**

ROAD WORKS

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DETAILED COST ESTIMATE

P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Cold Milling				
1	18/12/i	Cold milling of asphalt layer/concrete surface of specified thickness, loading of debris onto haul trucks via conveyor system and disposal at appropriate place i/c the charges of self propelled milling machine of specified size, dumper, pump, water lorry, compressor and Tungsten Carbide Bits etc complete in all respect as approved by Engineer Incharge..				
		i) 0~ 1" thick	Per Sft	18,900.00	15.45	292,005
		Excavation				
2	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	14.70	9,852.50	144,832
		Compaction of Earthwork				
3	3/25	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.	1000Cft	7.35	1,509.00	11,091
		Sub Base Course				

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DETAILED COST ESTIMATE

P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
4	18/3/a/ (ii) + 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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)	100Cft	73.50	21,439.95	1,575,836

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Water Bound Macadam				
5	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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)	100Cft	94.50	24,710.25	2,335,118
		Prime Coat				
6	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	211.50	1,966.70	415,957
		Carpeting				
		AWC				
7	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.	211.50	15,812.73	3,344,392
		Paint For Traffic Lanes				
8	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	2,800.00	59.20	165,760
		Tuff Paver				
9	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	14,700.00	197.15	2,898,105

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Road Edging				
10	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	420.00	53.05	22,281
		P.C.C (Between Asphalt and Tuff Paver)				
11	6/5 + 1/1	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (Including carriage of crush)				
		(c) Ratio 1: 1½: 3	100Cft	9.24	51,049.03	471,693
		Cat Eyes				
12	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	350.00	747.70	261,695
13	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	18.00	997.20	17,950
14	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	33.00	1,512.05	49,898

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DETAILED COST ESTIMATE

P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
15	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	18.00	1,203.95	21,671
		Total Amount Rs.				**12,028,284**
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.32	12,196.80	3,952
		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	2.50	9,852.50	24,631
		P.C.C				
3	6/5 + 1/1	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (Including carriage of crush)				
		(f) Ratio 1: 2: 4	100Cft	4.82	45,787.48	220,696
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	0.65	32,630.90	21,146
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	0.65	2,832.00	1,835
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100Sft	1.73	3,635.05	6,282

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Gully Grating Chamber				
7	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	20.00	16,703.00	334,060
8	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	10.00	2,862.00	28,620
		uPVC Pipe				
9	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	400.00	455.00	182,000
		RPC Manhole Cover				
10	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	10.00	11,742.00	117,420
		Manhole Cover				
11	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	10.00	500.00	5,000
		Total Amount (Rs)				**945,642**

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	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	4.71	11,658.25	54,910
		RCC Foundation for Poles				
2	6/6 + 1/1	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:- (Including carriage of crush)				
		(3) Type C (nominal mix 1: 2: 4)	Cft	336.00	545.02	183,127
		Steel Work				
3	6/12/b	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):-				
		('b) Deformed bars (Grade-40)	100Kg	8.40	31,572.25	265,207
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	1,750.00	177.75	311,063

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
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	280.00	119.20	33,376
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, 660/1100 volt cable:-				
		iii) 7/0.74 mm (7/0.029")	Rft	560.00	114.25	63,980
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	1,750.00	525.75	920,063
		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	14.00	116,333.05	1,628,663

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 66 & IK 08 or above Philips/Osram/Thorn or equivalent with corrosion resistant die casted Aluminum housing, silicon gasket in special groove, UV stable & scratch resistant synthetic materials, thermally hardened glass complete with LED Chip (Philips Lumiled/ Cree / Nichia / Osram make or equivalent), programmable LED driver (Harvard/ TCI/ Lumotech/ Philips/ VOSSLOH Schwabe /Lightech make or equivalent), minimum 10kV surge protection rating 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	14.00	52,598.60	736,380
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/i	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				
		(i) 10 KVA	Each	1.00	426,235.15	426,235

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
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	17.00	10,198.95	173,382
12	24/87	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN /SIEMEN /ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
		a) Tripple Pole				
		(ii) 15-100 Amp (10 KA,15KA)	Each	1.00	12,276.95	12,277
		Sub Total Scheduled Items: (A)				**4,893,986**
	Non Schedule	**Part-B**				
13	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	251,316	251,316
14	N.S	Electric Connection Charges	Each	1.00	450,000	450,000
		Total Cost (Part B)			**Rs.**	**701,316**
		Grand Total (Part A + Part B)			**Rs.**	**5,595,302**
		Grand Total Amount Rs.				**18,569,228**

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Cold Milling						
1	Cold milling of asphalt layer/concrete surface of specified thickness, loading of debris onto haul trucks via conveyor system and disposal at appropriate place i/c the charges of self propelled milling machine of specified size, dumper, pump, water lorry, compressor and Tungsten Carbide Bits etc complete in all respect as approved by Engineer Incharge..						
	RD 0+000 to 1+400	1	1,400	13.50		18,900	Sft
					Total	18,900	Sft
					Total.	**18,900.00**	**Sft**
	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 from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+400	1	1,400	10.50	1.00	14,700	Cft
					Total	14,700	Cft
					Total.	**14.70**	**%Cft**
	Compaction of Earthwork						
3	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+400	1	1,400	10.50	0.50	7,350	Cft
					Total	7,350	Cft
					Total.	**7.35**	**%oCft**
	Sub Base Course						

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
4	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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+400	1	1,400	10.50	0.50	7,350	Cft
					Total	7,350	Cft
					Total.	**73.50**	**%Cft**
	Water Bound Macadam						
5	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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						
	RD 0+000 to 1+400	1	1,400	13.50	0.50	9,450	Cft
					Total	9,450	Cft
					Total.	**94.50**	**%Cft**
	Prime Coat						
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.						
	For Road						
	RD 0+000 to 1+400	1	1,400	13.50		18,900	Sft
	Approach Roads	9	25	10.00		2,250	Sft
					Total	21,150	Sft

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total.	**211.50**	**%Sft**
	AWC						
7	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 1+400	1	1,400	13.50		18,900	Sft
	Approach Roads	9	25	10.00		2,250	Sft
					Total	21,150	Sft
					Total.	**211.50**	**%Sft**
	Paint For Traffic Lanes						
8	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 1+400	2	1,400			2,800	Rft
					Total.	**2,800**	**Rft**
	Tuff Paver						
9	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 1+400	1	1,400	10.50		14,700	Sft
					Total.	**14,700**	**Sft**
	Road Edging						
10	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 1+400	0.3	1,400			420	Rft
					Total.	**420**	**Rft**
	P.C.C (Between Asphalt and Tuff Paver)						
11	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate); (Including carriage of crush)						
	(c) Ratio 1: 1½: 3						
	RD 0+000 to 1+400	4	1,400	0.33	0.50	924	Cft
					Total	924	Cft

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

P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total.	**9.24**	**%Cft**
	Cat Eyes						
12	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	350				**350**	**Each**
13	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	3	3.00	2.00		**18**	**Sft**
14	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	3	11			**33**	**Rft**
15	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					**18**	**Sft**
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	10	8.64	0.75	0.50	32	Cft
					Total	**0.32**	**%Cft**
	Excavation						

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CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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	20	20.00	2.50	2.50	2,500	Cft
					Total	2,500	Cft
					Total	**2.50**	**%oCft**
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate); (Including carriage of crush)						
	(f) Ratio 1: 2: 4						
	Pipe Laying	20	10	1.50	1.50	450	Cft
	For manhole neck	10	8.64	0.75	0.50	32	Cft
					Total	482	Cft
					Total	**4.82**	**%Cft**
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	For manhole neck	10	8.64	0.75	1.00	65	Cft
					Total	65	Cft
					Total	**0.65**	**%Cft**
5	Extra for pacca brick work in steining of wells or any other circular masonry.				**Total**	**0.65**	**%Cft**
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck (10 x 2 = 20)	20	8.64		1.00	173	Sft
					Total	173	Sft
					Total	**1.73**	**%Sft**
	Gully Grating Chamber						

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CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
7	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.	20				**20.00**	**Each**
8	Supplying and filling sand under floor; or plugging in wells.	20	20.00	2.50	1.00	**10.00**	**%Cft**
	uPVC Pipe						
9	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)	20	20.00			**400**	**Rft**
	RPC Manhole Cover						
10	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)	10				**10**	**Each**
	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	1,750	1.00	2.50	4,375	Cft
	Light Poles	14	2.00	2.00	6.00	336	Cft
					Total	4,711	Cft
					Total	**4.71**	**%oCft**
	RCC Foundation for Poles						

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CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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:-						
	(3) Type C (nominal mix 1: 2: 4)						
	Light Poles	14	2.00	2.00	6.00	336	Cft
					Total	**336.00**	**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):-						
	('b) Deformed bars (Grade-40)		2.50Kg/Cft			**840**	**Kg**
					Total	**8.40**	**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)	14	125.00			**1,750**	**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	14	20.00			**280**	**Rft**
6	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-						

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CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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)	14	40.00			**560**	**Rft**
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	14	125.00			**1,750**	**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						
	(i) 10 mtr height	14				**14**	**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	14				**14**	**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**

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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						
	(i) 10 KVA	1				**1.00**	**Nos.**
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.	17				**17.00**	**No.**
12	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN /SIEMEN /ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge.						
	a) Tripple Pole						
	(ii) 15-100 Amp (10 KA,15KA)	1				**1.00**	**Each**

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P-7 RAILWAY CROSSING TO CANAL ROAD PART - 1

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
13	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.**
14	Electric Connection Charges	1				**1.00**	**Each**

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DETAILED COST ESTIMATE

P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Cold Milling				
1	18/12/i	Cold milling of asphalt layer/concrete surface of specified thickness, loading of debris onto haul trucks via conveyor system and disposal at appropriate place i/c the charges of self propelled milling machine of specified size, dumper, pump, water lorry, compressor and Tungsten Carbide Bits etc complete in all respect as approved by Engineer Incharge..				
		i) 0~ 1" thick	Per Sft	44,056.00	15.45	680,665
		Excavation				
2	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	20.73	9,852.50	204,242
		Compaction of Earthwork				
3	3/25	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.	1000Cft	10.36	1,509.00	15,633
		Sub Base Course				
4	18/3/a/ (ii) + 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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)	100Cft	103.64	21,439.95	2,222,036

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DETAILED COST ESTIMATE

P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Water Bound Macadam				
5	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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)	100Cft	103.64	24,710.25	2,560,970
		Prime Coat				
6	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	27.50	1,966.70	54,084
7	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	440.56	1,032.40	454,834
		Carpeting				
		AWC				
8	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.	468.06	15,812.73	7,401,306
		Paint For Traffic Lanes				
9	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	5,182.00	59.20	306,774
		Kerb Stone				
10	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	275.00	521.65	143,454

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DETAILED COST ESTIMATE

P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Tuff Paver				
11	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	20,728.00	197.15	4,086,525
		Road Edging				
12	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	777.00	53.05	41,220
		P.C.C (Between Asphalt and Tuff Paver)				
13	6/5 + 1/1	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (Including carriage of crush)				
		(c) Ratio 1: 1½: 3	100Cft	16.19	51,049.03	826,484
		Cat Eyes				
14	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	648.00	747.70	484,510
15	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	30.00	997.20	29,916

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DETAILED COST ESTIMATE

P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
16	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	55.00	1,512.05	83,163
17	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	30.00	1,203.95	36,119
		Total Amount Rs.				**19,631,936**
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.45	12,196.80	5,533
		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	4.25	9,852.50	41,873
		P.C.C				
3	6/5 + 1/1	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (Including carriage of crush)				
		(f) Ratio 1: 2: 4	100Cft	8.10	45,787.48	370,879
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	0.91	32,630.90	29,604

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	0.91	2,832.00	2,569
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100Sft	2.42	3,635.05	8,794
		Gully Grating Chamber				
7	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	34.00	16,703.00	567,902
8	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	17.00	2,862.00	48,654
		uPVC Pipe				
9	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	680.00	455.00	309,400
		RPC Manhole Cover				
10	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	14.00	11,742.00	164,388
		Manhole Cover				
11	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	14.00	500.00	7,000
		Total Amount (Rs)				**1,556,597**

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DETAILED COST ESTIMATE

P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	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	8.41	11,658.25	98,046
		RCC Foundation for Poles				
2	6/6 + 1/1	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:- (Including carriage of crush)				
		(3) Type C (nominal mix 1: 2: 4)	Cft	600.00	545.02	327,012
		Steel Work				
3	6/12/b	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):-				
		('b) Deformed bars (Grade-40)	100Kg	15.00	31,572.25	473,584
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	3,125.00	177.75	555,469

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DETAILED COST ESTIMATE

P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
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	500.00	119.20	59,600
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, 660/1100 volt cable:-				
		iii) 7/0.74 mm (7/0.029")	Rft	1,000.00	114.25	114,250
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	3,125.00	525.75	1,642,969
		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	25.00	116,333.05	2,908,326

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DETAILED COST ESTIMATE

P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 66 & IK 08 or above Philips /Osram /Thorn or equivalent with corrosion resistant die casted Aluminum housing, silicon gasket in special groove, UV stable & scratch resistant synthetic materials, thermally hardened glass complete with LED Chip (Philips Lumiled /Cree /Nichia /Osram make or equivalent), programmable LED driver (Harvard /TCI /Lumotech /Philips /VOSSLOH Schwabe /Lightech make or equivalent), minimum 10kV surge protection rating 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	24.00	52,598.60	1,262,366
		(viii) 150 Watt with 18000 lumens	Each	4.00	62,198.60	248,794
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/i	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				
		(i) 10 KVA	Each	1.00	426,235.15	426,235

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DETAILED COST ESTIMATE

P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
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	28.00	10,198.95	285,571
12	24/87	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN /SIEMEN /ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
		a) Tripple Pole				
		(ii) 15-100 Amp (10 KA,15KA)	Each	1.00	12,276.95	12,277
		Sub Total Scheduled Items: (A)				**8,499,822**
	Non Schedule	**Part-B**				
13	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	195,858	195,858
14	N.S	Shifting of 2 Nos. Wapda Electric Poles	Job			300,000
15	N.S	Shifting of 1 Nos. Telecommunication Poles	Job			50,000
16	N.S	Electric Connection Charges	Each	1.00	450,000	450,000
		Total Cost (Part B)			**Rs.**	**995,858**
		Grand Total (Part A + Part B)			**Rs.**	**9,495,680**
		Grand Total Amount Rs.				**30,684,213**

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Cold Milling						
1	Cold milling of asphalt layer/concrete surface of specified thickness, loading of debris onto haul trucks via conveyor system and disposal at appropriate place i/c the charges of self propelled milling machine of specified size, dumper, pump, water lorry, compressor and Tungsten Carbide Bits etc complete in all respect as approved by Engineer Incharge..						
	RD 0+000 to 1+300	1	1,300	18.00		23,400	Sft
	RD 1+300 to 2+040	1	740	16.00		11,840	Sft
	RD 2+040 to 2+591	1	551	16.00		8,816	Sft
					Total	44,056	Sft
					Total.	**44,056.00**	**Sft**
	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 from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+300	2	1,300	4.00	1.00	10,400	Cft
	RD 1+300 to 2+040	2	740	4.00	1.00	5,920	Cft
	RD 2+040 to 2+591	2	551	4.00	1.00	4,408	Cft
					Total	20,728	Cft
					Total.	**20.73**	**%Cft**
	Compaction of Earthwork						
3	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+300	2	1,300	4.00	0.50	5,200	Cft
	RD 1+300 to 2+040	2	740	4.00	0.50	2,960	Cft
	RD 2+040 to 2+591	2	551	4.00	0.50	2,204	Cft
					Total	10,364	Cft

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total.	**10.36**	**%oCft**
	Sub Base Course						
4	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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+300	2	1,300	4.00	0.50	5,200	Cft
	RD 1+300 to 2+040	2	740	4.00	0.50	2,960	Cft
	RD 2+040 to 2+591	2	551	4.00	0.50	2,204	Cft
					Total	10,364	Cft
					Total.	**103.64**	**%Cft**
	Prime Coat						
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.						
	Approach Roads	11	25	10.00		2,750	Sft
					Total	2,750	Sft
					Total.	**27.50**	**%Sft**
7	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)						
	RD 0+000 to 1+300	1	1,300	18.00		23,400	Sft
	RD 1+300 to 2+040	1	740	16.00		11,840	Sft
	RD 2+040 to 2+591	1	551	16.00		8,816	Sft
					Total	44,056	Sft
					Total.	**440.56**	**%Sft**
	Carpeting						
	AWC						

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
8	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 1+300	1	1,300	18.00		23,400	Sft
	RD 1+300 to 2+040	1	740	16.00		11,840	Sft
	RD 2+040 to 2+591	1	551	16.00		8,816	Sft
	Approach Roads	11	25	10.00		2,750	Sft
					Total	46,806	Sft
					Total.	**468.06**	**%Sft**
	Paint For Traffic Lanes						
9	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 1+300	2	1,300			2,600	Rft
	RD 1+300 to 2+040	2	740			1,480	Rft
	RD 2+040 to 2+591	2	551			1,102	Rft
					Total.	**5,182**	**Rft**
10	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 2+040 to 2+591	1	275.00			275	Rft
					Total.	**275**	**Rft**
	Tuff Paver						
11	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 1+300	2	1,300	4.00		10,400	Sft
	RD 1+300 to 2+040	2	740	4.00		5,920	Sft
	RD 2+040 to 2+591	2	551	4.00		4,408	Sft
					Total.	**20,728**	**Sft**
	Road Edging						

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
12	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 2+591	0.3	2,591			777	Rft
					Total.	**777**	**Rft**
	P.C.C (Between Asphalt and Tuff Paver)						
13	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (Including carriage of crush)						
	(c) Ratio 1: 1½: 3						
	RD 0+000 to 1+300	4	1,300	0.33	0.50	858	Cft
	RD 1+300 to 2+040	4	740	0.33	0.50	488	Cft
	RD 2+040 to 2+591	3	551	0.33	0.50	273	Cft
					Total	1,619	Cft
					Total.	**16.19**	**%Cft**
	Cat Eyes						
14	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	648				**648**	**Each**
15	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	5	3.00	2.00		**30**	**Sft**

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
16	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	5	11			**55**	**Rft**
17	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					**30**	**Sft**
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	14	8.64	0.75	0.50	45	Cft
					Total	**0.45**	**%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	34	20.00	2.50	2.50	4,250	Cft
					Total	4,250	Cft
					Total	**4.25**	**%oCft**
	P.C.C						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (Including carriage						
	(f) Ratio 1: 2: 4						
	Pipe Laying	34	10	1.50	1.50	765	Cft
	For manhole neck	14	8.64	0.75	0.50	45	Cft
					Total	810	Cft

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CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total	**8.10**	**%Cft**
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	For manhole neck	14	8.64	0.75	1.00	91	Cft
					Total	91	Cft
					Total	**0.91**	**%Cft**
5	Extra for pacca brick work in steining of wells or any other circular masonry.				**Total**	**0.91**	**%Cft**
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck (14 x 2 = 28)	28	8.64		1.00	242	Sft
					Total	242	Sft
					Total	**2.42**	**%Sft**
	Gully Grating Chamber						
7	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.	34				**34.00**	**Each**
8	Supplying and filling sand under floor; or plugging in wells.	34	20.00	2.50	1.00	**17.00**	**%Cft**
	uPVC Pipe						
9	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)	34	20.00			**680**	**Rft**
	RPC Manhole Cover						

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
10	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)	14				**14**	**Each**
	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	3,125	1.00	2.50	7,813	Cft
	Light Poles	25	2.00	2.00	6.00	600	Cft
					Total	8,413	Cft
					Total	**8.41**	**%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:-						
	(3) Type C (nominal mix 1: 2: 4)						
	Light Poles	25	2.00	2.00	6.00	600	Cft
					Total	**600.00**	**Cft**
	Steel Work						

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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):-						
	('b) Deformed bars (Grade-40)		2.50Kg/Cft			**1,500**	**Kg**
					Total	**15.00**	**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)	25	125.00			**3,125**	**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	25	20.00			**500**	**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)	25	40.00			**1,000**	**Rft**
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	25	125.00			**3,125**	**Rft**
	vii) 16 mm (7/0.064")	1	100.00			**100**	**Rft**

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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						
	(i) 10 mtr height	25				**25**	**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	24				**24**	**Nos**
	(viii) 150 Watt with 18000 lumens	4				**4**	**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**

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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						
	(i) 10 KVA	1				**1.00**	**Nos.**
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.	28				**28.00**	**No.**
12	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN /SIEMEN /ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge.						
	a) Tripple Pole						
	(ii) 15-100 Amp (10 KA,15KA)	1				**1.00**	**Each**

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P-7 CLUB ROAD TO CHUNGI NO. 6 PART - 2

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
13	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.**
14	Shifting of 2 Nos. Wapda Electric Poles						
15	Shifting of 1 Nos. Telecommunication Poles						
16	Electric Connection Charges	1				**1.00**	**Each**

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DETAILED COST ESTIMATE

P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Cold Milling				
1	18/12/i	Cold milling of asphalt layer/concrete surface of specified thickness, loading of debris onto haul trucks via conveyor system and disposal at appropriate place i/c the charges of self propelled milling machine of specified size, dumper, pump, water lorry, compressor and Tungsten Carbide Bits etc complete in all respect as approved by Engineer Incharge..				
		i) 0~ 1" thick	Per Sft	110,773.00	15.45	1,711,443
		Excavation				
2	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	121.08	9,852.50	1,192,941
		Compaction of Earthwork				
3	3/25	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.	1000Cft	60.54	1,509.00	91,355
		Sub Base Course				

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DETAILED COST ESTIMATE

P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
4	18/3/a/ (ii) + 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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)	100Cft	605.38	21,439.95	12,979,317

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DETAILED COST ESTIMATE

P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Prime Coat				
5	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	60.00	1,966.70	118,002
6	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	1,107.73	1,032.40	1,143,620
		Carpeting				
		AWC				
7	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.	1,167.73	15,812.73	18,464,999
		Paint For Traffic Lanes				
8	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	13,608.00	59.20	805,594
		Kerb Stone				
9	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	1,420.00	521.65	740,743
		Paint for Existing Kerb Stone				
		Painting old surfaces:-				
10	13/4	f) Painting small detached articles, not exceeding one square foot (Sq.m) of painted surface:-				
		i) first coat	100Nos.	34.00	1,466.95	49,876
		ii) each subsequent coat	100Nos.	34.00	1,189.45	40,441
		Tuff Paver				
11	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	121,075.00	197.15	23,869,936

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DETAILED COST ESTIMATE

P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Road Edging				
12	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	1,475.00	53.05	78,249
		P.C.C (Between Asphalt and Tuff Paver)				
13	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (Including carriage of crush)				
		(c) Ratio 1: 1½: 3	100Cft	16.22	51,049.03	828,015
		Cat Eyes				
14	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	806.00	747.70	602,646
		(B) Uni-Directional				
		(ii) 43 Glass beads a side	Each	848.00	585.70	496,674
15	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	48.00	997.20	47,866
16	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	88.00	1,512.05	133,060

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DETAILED COST ESTIMATE

P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
17	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	48.00	1,203.95	57,790
		Total Amount Rs.				**63,452,567**
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	1.36	12,196.80	16,598
		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	43.20	9,852.50	425,628
		P.C.C				
3	6/5 + 1/1	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100Cft	29.76	37,291.81	1,109,804
		(f) Ratio 1: 2: 4	100Cft	91.86	45,787.48	4,206,038
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	107.72	32,630.90	3,515,058
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	2.72	2,832.00	7,708
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
		b) ½" (13 mm) thick	100Sft	119.26	3,635.05	433,509

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DETAILED COST ESTIMATE

P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		R.C.C Work				
7	6/6/a/i/3 + 1/1	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).(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.(Including carriage of crush)				
		Type C (nominal mix 1:2:4)	P Cft	2,626.00	654.37	1,718,376
		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	80.43	31,962.00	2,570,592

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DETAILED COST ESTIMATE

P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		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	48.00	16,703.00	801,744
10	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	30.00	2,862.00	85,860
		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	960.00	455.00	436,800
		RPC Manhole Cover				
12	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	42.00	11,742.00	493,164
		Kerb Stone				
13	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	1,400.00	521.65	730,310
		Manhole Cover				
14	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	42.00	500.00	21,000
		Total Amount (Rs)				**16,572,189**

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DETAILED COST ESTIMATE

P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	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	16.15	11,658.25	188,281
		RCC Foundation for Poles				
2	6/6 + 1/1	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:- (Including carriage of crush)				
		(3) Type C (nominal mix 1: 2: 4)	Cft	1,152.00	545.02	627,863
		Steel Work				
3	6/12/b	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):-				
		('b) Deformed bars (Grade-40)	100Kg	28.80	31,572.25	909,281
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	6,000.00	177.75	1,066,500

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ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
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	960.00	119.20	114,432
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, 660/1100 volt cable:-				
		iii) 7/0.74 mm (7/0.029")	Rft	1,920.00	114.25	219,360
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	6,000.00	525.75	3,154,500
		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	16.00	116,333.05	1,861,329
		b) Double Arm				
		(i) 10 mtr height	Each	32.00	120,149.05	3,844,770

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P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	24/69/c	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 66 & IK 08 or above Philips /Osram /Thorn or equivalent with corrosion resistant die casted Aluminum housing, silicon gasket in special groove, UV stable & scratch resistant synthetic materials, thermally hardened glass complete with LED Chip (Philips Lumiled /Cree /Nichia /Osram make or equivalent), programmable LED driver (Harvard /TCI /Lumotech/ Philips /VOSSLOH Schwabe/ Lightech make or equivalent), minimum 10kV surge protection rating 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	80.00	52,598.60	4,207,888
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				
		(iii) 25 KVA	Each	1.00	581,485.15	581,485

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P-8 PEOPLE COLONY ROAD

ROADS NETWORK

Sr. No	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
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	51.00	10,198.95	520,146
12	24/87	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN /SIEMEN /ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge.				
		a) Tripple Pole				
		(ii) 15-100 Amp (10 KA,15KA)	Each	1.00	12,276.95	12,277
		Sub Total Scheduled Items: (A)				**17,393,435**
	Non Schedule	**Part-B**				
13	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	251,316	251,316
14	N.S	Shifting of 2 Nos. Wapda Electric Poles	Job			300,000
15	N.S	Electric Connection Charges	Each	1.00	450,000	450,000
		Total Cost (Part B)			**Rs.**	**1,001,316**
		Grand Total (Part A + Part B)			**Rs.**	**18,394,751**
		Grand Total Amount Rs.				**98,419,506**

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Cold Milling						
1	Cold milling of asphalt layer/concrete surface of specified thickness, loading of debris onto haul trucks via conveyor system and disposal at appropriate place i/c the charges of self propelled milling machine of specified size, dumper, pump, water lorry, compressor and Tungsten Carbide Bits etc complete in all respect as approved by Engineer Incharge..						
	RD 0+000 to 1+420	1	1,420	21.00		29,820	Sft
	RD 1+420 to 3+115	2	1,695	15.00		50,850	Sft
	RD 3+115 to 4+530	1	1,415	15.00		21,225	Sft
	RD 4+530 to 4+916	1	386	23.00		8,878	Sft
					Total	110,773	Sft
					Total.	**110,773.00**	**Sft**
	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 from trenches, back filling and surplus excavated material disposed of and dressed within 50 ft. (15 m) lead:-						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+420	2	1,420	15.00	1.00	42,600	Cft
	RD 1+420 to 3+115	2	1,695	10.00	1.00	33,900	Cft
	RD 3+115 to 4+530	2	1,415	12.00	1.00	33,960	Cft
	RD 4+530 to 4+916	1	386	27.50	1.00	10,615	Cft
					Total	121,075	Cft
					Total.	**121.08**	**%Cft**
	Compaction of Earthwork						
3	Compaction of earthwork with power road roller, including ploughing, mixing, moistening earth to optimum moisture content in layers, etc. complete: i) 95% to 100% maximum modified AASHO dry density.						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+420	2	1,420	15.00	0.50	21,300	Cft
	RD 1+420 to 3+115	2	1,695	10.00	0.50	16,950	Cft
	RD 3+115 to 4+530	2	1,415	12.00	0.50	16,980	Cft

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 4+530 to 4+916	1	386	27.50	0.50	5,308	Cft
					Total	60,538	Cft
					Total.	**60.54**	**%oCft**
	Sub Base Course						
4	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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)						
	For Tuff Paver Shoulders						
	RD 0+000 to 1+420	2	1,420	15.00	0.50	21,300	Cft
	RD 1+420 to 3+115	2	1,695	10.00	0.50	16,950	Cft
	RD 3+115 to 4+530	2	1,415	12.00	0.50	16,980	Cft
	RD 4+530 to 4+916	1	386	27.50	0.50	5,308	Cft
					Total	60,538	Cft
					Total.	**605.38**	**%Cft**
	Prime Coat						
5	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.						
	Approach Roads	20	25	12.00		6,000	Sft
					Total	6,000	Sft
					Total.	**60.00**	**%Sft**
6	Providing and laying bituminous tack coat, using 10 lbs. of bitumen per 100 Sft (0.49 Kg of bitumen per sq.m.)						
	RD 0+000 to 1+420	1	1,420	21.00		29,820	Sft
	RD 1+420 to 3+115	2	1,695	15.00		50,850	Sft
	RD 3+115 to 4+530	1	1,415	15.00		21,225	Sft
	RD 4+530 to 4+916	1	386	23.00		8,878	Sft
					Total	110,773	Sft
					Total.	**1,107.73**	**%Sft**

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

P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Carpeting						
	AWC						
7	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 1+420	1	1,420	21.00		29,820	Sft
	RD 1+420 to 3+115	2	1,695	15.00		50,850	Sft
	RD 3+115 to 4+530	1	1,415	15.00		21,225	Sft
	RD 4+530 to 4+916	1	386	23.00		8,878	Sft
	Approach Roads	20	25	12.00		6,000	Sft
					Total	116,773	Sft
					Total.	**1,167.73**	**%Sft**
	Paint For Traffic Lanes						
8	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 1+420	2	1,420			2,840	Rft
	RD 1+420 to 3+115	4	1,695			6,780	Rft
	RD 3+115 to 4+530	2	1,415			2,830	Rft
	RD 4+530 to 4+916	3	386			1,158	Rft
					Total.	**13,608**	**Rft**
	Kerb Stone						
9	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 0+000 to 1+420	1	1,420			1,420	Rft
					Total.	**1,420**	**Rft**
	Paint for Existing Kerb Stone						
	Painting old surfaces:-						
10	f) Painting small detached articles, not exceeding one square foot (Sq.m) of painted surface:-						
	i) first coat						
	ii) each subsequent coat						
	RD 1+420 to 3+115	2	1,695			3,390	Nos.

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total	**34.00**	**%Nos.**
	Tuff Paver						
11	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 1+420	2	1,420	15.00		42,600	Sft
	RD 1+420 to 3+115	2	1,695	10.00		33,900	Sft
	RD 3+115 to 4+530	2	1,415	12.00		33,960	Sft
	RD 4+530 to 4+916	1	386	27.50		10,615	Sft
					Total.	**121,075**	**Sft**
	Road Edging						
12	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 4+916	0.3	4,916			1,475	Rft
					Total.	**1,475**	**Rft**
	P.C.C (Between Asphalt and Tuff Paver)						
13	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (Including carriage of crush)						
	(c) Ratio 1: 1½: 3						
	RD 0+000 to 1+420	2	1,420	0.33	0.50	469	Cft
	RD 1+420 to 3+115	2	1,695	0.33	0.50	559	Cft
	RD 3+115 to 4+530	2	1,415	0.33	0.50	467	Cft
	RD 4+530 to 4+916	2	386	0.33	0.50	127	Cft
					Total	1,622	Cft
					Total.	**16.22**	**%Cft**
	Cat Eyes						
14	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						

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

P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	(1) Dual-Directional						
	(ii) 43x2=86 Glass beads a side	806				**806**	**Each**
	(B) Uni-Directional						
	(ii) 43 Glass beads a side	848				**848**	**Each**
15	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	8	3.00	2.00		**48**	**Sft**
16	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	8	11.00			**88**	**Rft**
17	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					**48**	**Sft**
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	42	8.64	0.75	0.50	136	Cft
					Total	**1.36**	**%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.						

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Pipe Laying	48	25.00	2.50	2.50	7,500	Cft
	Drain Right side Rd 0+000 to 1+400	1	1,400	4.25	3.00	17,850	Cft
	Drain Left side Rd 0+000 to 1+400	1	1,400	4.25	3.00	17,850	Cft
					Total	43,200	Cft
					Total	**43.20**	**%oCft**
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Drain Right side Rd 0+000 to 1+400	1	1,400	4.25	0.25	1,488	Cft
	Drain Left side Rd 0+000 to 1+400	1	1,400	4.25	0.25	1,488	Cft
					Total	2,976	Cft
					Total	**29.76**	**%Cft**
	(f) Ratio 1: 2: 4						
	Drain Right side Rd 0+000 to 1+400	1	1,400	4.25	0.50	2,975	Cft
	Benching	1	1,400	1.50	0.25	525	Cft
	Topping	2	1,400	0.75	0.17	350	Cft
	Drain Left side Rd 0+000 to 1+400	1	1,400	4.25	0.50	2,975	Cft
	Benching	1	1,400	1.50	0.25	525	Cft
	Topping	2	1,400	0.75	0.17	350	Cft
	Pipe Laying	48	13	1.50	1.50	1,350	Cft
	For manhole neck	42	8.64	0.75	0.50	136	Cft
					Total	9,186	Cft
					Total	**91.86**	**%Cft**
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	Drain Right side Rd 0+000 to 1+400	2	1,400	1.125	1.00	3,150	Cft
		2	1,400	0.75	1.00	2,100	Cft
	Drain Left side Rd 0+000 to 1+400	2	1,400	1.125	1.00	3,150	Cft
		2	1,400	0.75	1.00	2,100	Cft
	For manhole neck	42	8.64	0.75	1.00	272	Cft
					Total	10,772	Cft
					Total	**107.72**	**%Cft**
5	Extra for pacca brick work in steining of wells or any other circular masonry.				**Total**	**2.72**	**%Cft**
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	Drain Right side Rd 0+000 to 1+400	2	1,400		2.00	5,600	Sft

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Drain Left side Rd 0+000 to 1+400	2	1,400		2.00	5,600	Sft
	For manhole neck (42 x 2 = 84)	84	8.64		1.00	726	Sft
					Total	11,926	Sft
					Total	**119.26**	**%Sft**
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).(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.(Including carriage of crush)						
	Drain Right side Rd 0+000 to 1+400	0.4	1,400	3.50	0.67	1,313.00	Cft
		0.4	1,400	3.50	0.67	1,313.00	Cft
					Total	**2,626.00**	**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		2,626	Cft @	6.75	17,726	lbs/cft
						8,043	kg
					Total	**80.43**	**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.	48				**48.00**	**Each**
10	Supplying and filling sand under floor; or plugging in wells.	48	25.00	2.50	1.00	**30.00**	**%Cft**
	uPVC Pipe						

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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)	48	20.00			**960**	**Rft**
	RPC Manhole Cover						
12	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)	42				**42**	**Each**
	Kerb Stone						
13	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	1	1,400	0.50		700	Rft
		1	1,400	0.50		700	Rft
						1,400	**Rft**
	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	6,000	1.00	2.50	15,000	Cft
	Light Poles	48	2.00	2.00	6.00	1,152	Cft
					Total	16,152	Cft
					Total	**16.15**	**%oCft**
	RCC Foundation for Poles						

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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:-						
	(3) Type C (nominal mix 1: 2: 4)						
	Light Poles	48	2.00	2.00	6.00	1,152	Cft
					Total	**1,152**	**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):-						
	('b) Deformed bars (Grade-40)		2.50Kg/Cft			**2,880**	**Kg**
					Total	**28.80**	**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)	48	125.00			**6,000**	**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	48	20.00			**960**	**Rft**
6	Supply and erection of copper conductor cables for service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-						

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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)	48	40.00			**1,920**	**Rft**
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	48	125.00			**6,000**	**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						
	(i) 10 mtr height	16				**16**	**Nos**
	b) Double Arm						
	(i) 10 mtr height	32				**32**	**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	80				**80**	**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**

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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.**
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.	51				**51.00**	**No.**
12	Supplying ,Installation and commissioning of MCCB (Moulded Case Circuit Breaker) of specified rating made of LEGRAND FRANCE/ GE U.S.A / SCHNEIDER GERMANY / TERASAKI JAPAN /SIEMEN /ABB SWITZERLAND (with fixed Thermal-Magnetic Trip) in prelaid DBs and Panels i/c the cost of screws, necessary wire complete in all respect as approved and directed by the Engineer Incharge.						
	a) Tripple Pole						
	(ii) 15-100 Amp (10 KA,15KA)	1				**1.00**	**Each**

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P-8 PEOPLE COLONY ROAD

CALCULATION OF QUANTITES

ROADS NET WORK

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
13	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.**
14	Shifting of 2 Nos. Wapda Electric Poles						
15	Electric Connection Charges	1				**1.00**	**Each**

ENVIRONMENT AND SOCIAL MITIGATION COST

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	20.00	700.00	14,000
2	Safety Gum Shoes	Nos	20.00	1,350.00	27,000
3	Hand Gloves	Nos	21.00	245.00	5,145
4	First Aid Box (Including essential Medicine)	Nos	2.00	5,000.00	10,000
5	Safety Hard Helmets MSA	Nos	21.00	2,000.00	42,000
6	Safety Goggles	Nos	19.00	550.00	10,450
7	Reflective Safety Vests	Nos	19.00	550.00	10,450
8	Infrared Thermometer (Benetech GM-2200 OR equivalent)	Nos	1.00	45,000.00	45,000
				Sub Total	**164,045**
	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	20.00	1,500.00	30,000
5	Emergency Portable Light	Nos	1.00	5,000.00	5,000
6	Solid Waste Collection Drums	Nos	4.00	5,000.00	20,000
7	Fire Extinguishers DCP	Nos	5.00	7,000.00	35,000
				Sub Total	**217,000**
	Others				
1	Pole Hanging Waste Bins	Nos.	4.00	10,000	40,000
2	Water Sprinkling (Dust Abatement)	L.S	1.00	200,000	200,000
3	Roadside Plantation	L.S	1.00	50,000	50,000
				Sub Total	**290,000**
	Total Amount (Rs)				**671,045**

RATE ANALYSIS

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

Rate Analysis

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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)

Crush Stone **218 KM**

Sr. No.	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs)
1		**Material**					
	18-3 a(ii)	Crushed stone aggregate.	100 Cft	1	1	8,195.25	8,195.25
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
		5th KM	100 Cft	1	1.20	75.85	91.02
	1/1	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	190	1.20	52.20	11,901.60
		From 201 km to 250 km	100 Cft	18	1.20	3.25	70.20
		Total.					**21,439.95**
		Total Amount per 100 Cft					**21,439.95**
		Total Cost for Per Cft					**214.40**

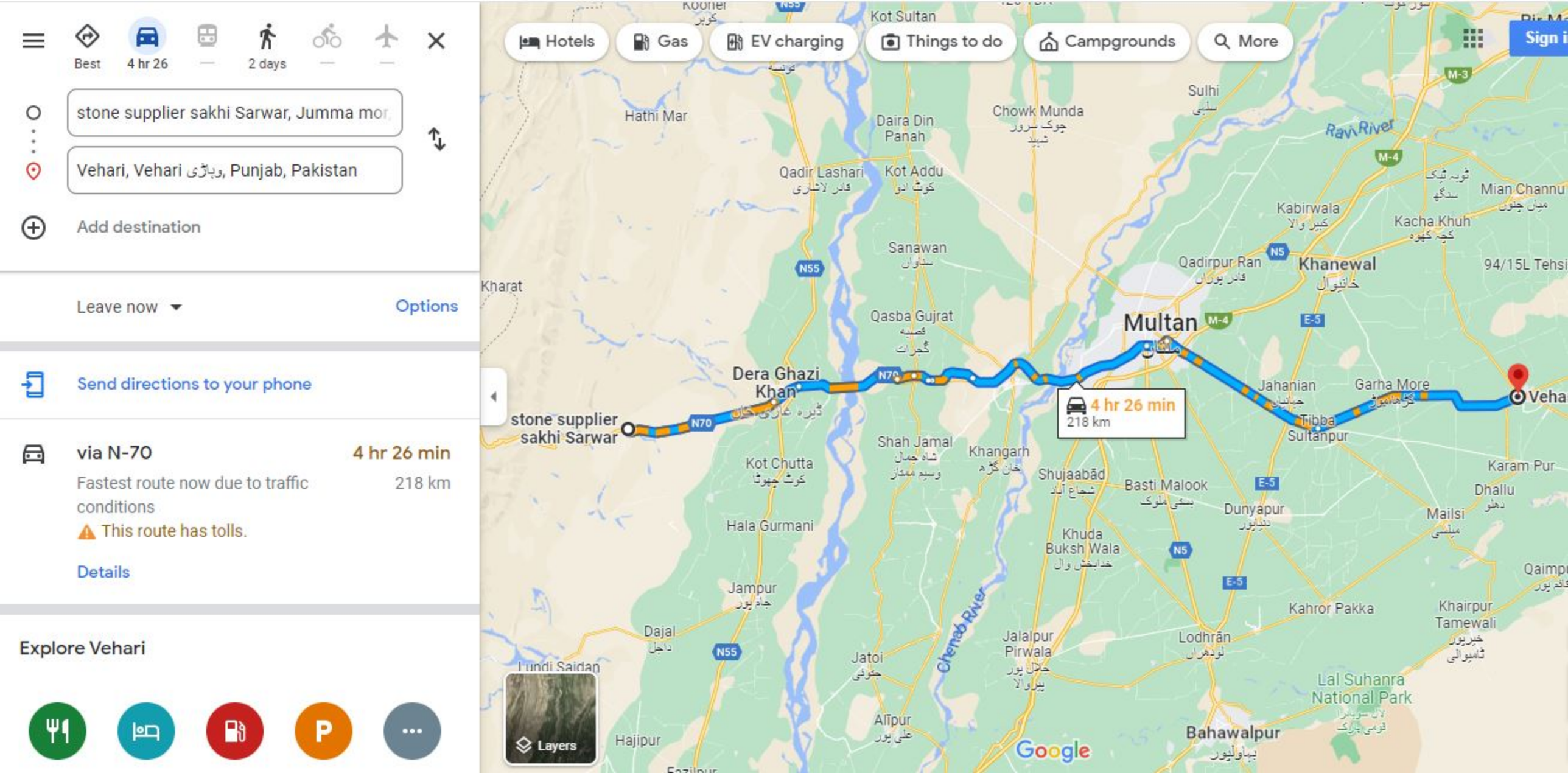
PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis

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 Sakhi Sarwar querry to site, actual compacted depth shall be considered for payment)

218 KM

Sr. No.	1st BI-Annual-2023 (Jan to Jun) Vehari	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/4(a)	Crushed stone aggregate	100Cft		1	11,244.80	11,244.80
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	190	1.22	52.20	12,099.96
		From 201 km to 250 km	100 Cft	18	1.22	3.25	71.37
		Total.					**24,710.25**
		Total Amount per 100 Cft					**24,710.25**
		Total Cost for Per Cft					**247.10**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EV charging
Things to do
Campgrounds
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PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis

AWC

Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick)
(iv) 4.5% Bitumen

283 Km

Sr. No.	1st BI-Annual-2023 (Jan to Jun) Vehari	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) (iv) 4.5% Bitumen	Per inch thickness per 100Sft.		1.00	13,972.50	13,972.50
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	0.1642	305.40	50.15
		2nd KM	100 Cft	1	0.1642	145.65	23.92
		3rd KM	100 Cft	1	0.1642	114.10	18.74
		4th KM	100 Cft	1	0.1642	81.20	13.33
		5th KM	100 Cft	1	0.1642	75.85	12.45
		6th KM	100 Cft	1	0.1642	74.60	12.25
		7th KM	100 Cft	1	0.1642	69.60	11.43
		8th KM	100 Cft	1	0.1642	68.85	11.31
		9th KM	100 Cft	1	0.1642	64.75	10.63
		10th KM	100 Cft	1	0.1642	60.75	9.98
		From 11 km to 200 km	100 Cft	190	0.1642	52.20	1,628.54
		From 201 km to 250 km	100 Cft	50	0.1642	3.25	26.68
		251 Kms & subsequent Kms	100 Cft	33	0.1642	2.00	10.84
		Total.					**15,812.73**
		Total Amount per 100 Sft					**15,812.73**
		Total Cost for Per Sft					**158.13**

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

Rate Analysis

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 100 Rft			
			Qty	Rate Per Unit		Amount (Rs.)
	Page No112					
1	A	RPC Manhole Cover	1.00	No	8400	No	8,400.00
		Carriage					1,000
						Total Rs.	**9,400.00**
		LABOUR					
2	LB-024	Skilled Cooly	0.25	Nos.	1,400.00	per day	350.00
						Total.	**350.00**
		Sundries 10 %					35.00
						Total Rs.	**385.00**
						Total (1+2)	**9,785.00**
		Contractor's Profit 20 %					1,957.00
		Total					**11,742**
		ITEM RATES					
		Composite rate Set				**Rs.**	**11,742**

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

Rate Analysis

Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):- (i) Ratio 1: 4: 8

							283 Km
Sr. No.	**1st BI-Annual-2023 (Jan to Jun) Vehari**	**Description**	**Unit**	**Lead (Km)**	**Qty**	**Rate (Rs)**	**Amount (Rs.)**
1	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		1.00	26,670.70	26,670.70
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	0.9477	305.40	289.43
		2nd KM	100 Cft	1	0.9477	145.65	138.03
		3rd KM	100 Cft	1	0.9477	114.10	108.13
		4th KM	100 Cft	1	0.9477	81.20	76.95
		5th KM	100 Cft	1	0.9477	75.85	71.88
		6th KM	100 Cft	1	0.9477	74.60	70.70
		7th KM	100 Cft	1	0.9477	69.60	65.96
		8th KM	100 Cft	1	0.9477	68.85	65.25
		9th KM	100 Cft	1	0.9477	64.75	61.36
		10th KM	100 Cft	1	0.9477	60.75	57.57
		From 11 km to 200 km	100 Cft	190	0.9477	52.20	9,399.29
		From 201 km to 250 km	100 Cft	50	0.9477	3.25	154.00
		251 Kms & susequent Kms	100 Cft	33	0.9477	2.00	62.55
		Total.					**37,291.81**
		Total Amount per 100 Cft					**37,291.81**
		Total Cost for Per Cft					**372.92**

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

Rate Analysis

Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):- (f) Ratio 1: 2: 4

							283 Km
Sr. No.	**1st BI-Annual-2023 (Jan to Jun) Vehari**	**Description**	**Unit**	**Lead (Km)**	**Qty**	**Rate (Rs)**	**Amount (Rs.)**
1	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		1.00	35,925.10	35,925.10
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	0.8800	305.40	268.75
		2nd KM	100 Cft	1	0.8800	145.65	128.17
		3rd KM	100 Cft	1	0.8800	114.10	100.41
		4th KM	100 Cft	1	0.8800	81.20	71.46
		5th KM	100 Cft	1	0.8800	75.85	66.75
		6th KM	100 Cft	1	0.8800	74.60	65.65
		7th KM	100 Cft	1	0.8800	69.60	61.25
		8th KM	100 Cft	1	0.8800	68.85	60.59
		9th KM	100 Cft	1	0.8800	64.75	56.98
		10th KM	100 Cft	1	0.8800	60.75	53.46
		From 11 km to 200 km	100 Cft	190	0.8800	52.20	8,727.84
		From 201 km to 250 km	100 Cft	50	0.8800	3.25	143.00
		251 Kms & susequent Kms	100 Cft	33	0.8800	2.00	58.08
		Total.					**45,787.48**
		Total Amount per 100 Cft					**45,787.48**
		Total Cost for Per Cft					**457.87**

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

Rate Analysis

Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):- (c) Ratio 1: 1½: 3

							283 Km
Sr. No.	**1st BI-Annual-2023 (Jan to Jun) Vehari**	**Description**	**Unit**	**Lead (Km)**	**Qty**	**Rate (Rs)**	**Amount (Rs.)**
1	6/5	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):- (c) Ratio 1: 1½: 3	100Cft		1.00	41,632.30	41,632.30
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	0.8400	305.40	256.54
		2nd KM	100 Cft	1	0.8400	145.65	122.35
		3rd KM	100 Cft	1	0.8400	114.10	95.84
		4th KM	100 Cft	1	0.8400	81.20	68.21
		5th KM	100 Cft	1	0.8400	75.85	63.71
		6th KM	100 Cft	1	0.8400	74.60	62.66
		7th KM	100 Cft	1	0.8400	69.60	58.46
		8th KM	100 Cft	1	0.8400	68.85	57.83
		9th KM	100 Cft	1	0.8400	64.75	54.39
		10th KM	100 Cft	1	0.8400	60.75	51.03
		From 11 km to 200 km	100 Cft	190	0.8400	52.20	8,331.12
		From 201 km to 250 km	100 Cft	50	0.8400	3.25	136.50
		251 Kms & susequent Kms	100 Cft	33	0.8800	2.00	58.08
		Total.					**51,049.03**
		Total Amount per 100 Cft					**51,049.03**
		Total Cost for Per Cft					**510.49**

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

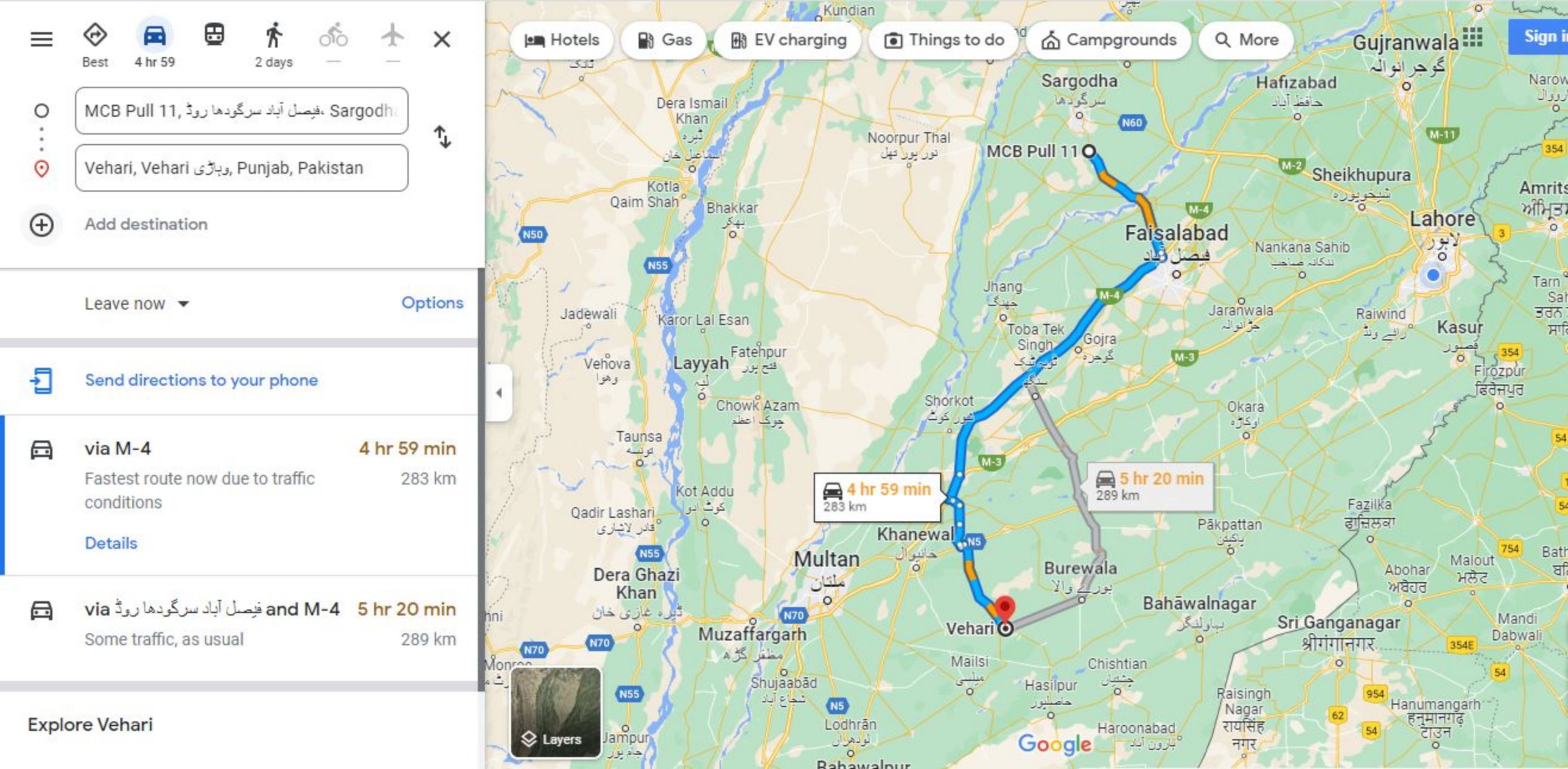
Rate Analysis

							283 Km
Sr. No.	**1st BI-Annual-2023 (Jan to Jun) Vehari**	**Description**	**Unit**	**Lead (Km)**	**Qty**	**Rate (Rs)**	**Amount (Rs.)**
1	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:-					
		(3) Type C (nominal mix 1: 2: 4)	Cft		1.00	446.40	446.40
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	0.0088	305.40	2.69
		2nd KM	100 Cft	1	0.0088	145.65	1.28
		3rd KM	100 Cft	1	0.0088	114.10	1.00
		4th KM	100 Cft	1	0.0088	81.20	0.71
		5th KM	100 Cft	1	0.0088	75.85	0.67
		6th KM	100 Cft	1	0.0088	74.60	0.66
		7th KM	100 Cft	1	0.0088	69.60	0.61
		8th KM	100 Cft	1	0.0088	68.85	0.61
		9th KM	100 Cft	1	0.0088	64.75	0.57
		10th KM	100 Cft	1	0.0088	60.75	0.53
		From 11 km to 200 km	100 Cft	190	0.0088	52.20	87.28
		From 201 km to 250 km	100 Cft	50	0.0088	3.25	1.43
		251 Kms & susequent Kms	100 Cft	33	0.0088	2.00	0.58
		Total.					**545.02**
		Total Amount per Cft					**545.02**

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

Rate Analysis

							283 Km
Sr. No.	**1st BI-Annual-2023 (Jan to Jun) Vehari**	**Description**	**Unit**	**Lead (Km)**	**Qty**	**Rate (Rs)**	**Amount (Rs.)**
1	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).(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)	Cft		1.00	555.75	555.75
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	0.0088	305.40	2.69
		2nd KM	100 Cft	1	0.0088	145.65	1.28
		3rd KM	100 Cft	1	0.0088	114.10	1.00
		4th KM	100 Cft	1	0.0088	81.20	0.71
		5th KM	100 Cft	1	0.0088	75.85	0.67
		6th KM	100 Cft	1	0.0088	74.60	0.66
		7th KM	100 Cft	1	0.0088	69.60	0.61
		8th KM	100 Cft	1	0.0088	68.85	0.61
		9th KM	100 Cft	1	0.0088	64.75	0.57
		10th KM	100 Cft	1	0.0088	60.75	0.53
		From 11 km to 200 km	100 Cft	190	0.0088	52.20	87.28
		From 201 km to 250 km	100 Cft	50	0.0088	3.25	1.43
		251 Kms & susequent Kms	100 Cft	33	0.0088	2.00	0.58
		Total.					**654.37**
		Total Amount per Cft					**654.37**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Firozpur
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Multan
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Pākpattan
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Sri Ganganagar
Mandi Dabwali
Chishtian
Hasilpur
Haroonabad
Raisingh Nagar
Hanumangarh
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PUNJAB CITIES PROGRAM (PCP)
DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS AND RESIDENTS SUPERVISION IN 16 CITIES OF PUNJAB

Rate Analysis

Description

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 — **Unit.** **Each**

Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per Each		
			Qty	Rate Per Unit	Amount (Rs.)
1	MR	LCP	1.00 No	209,430 No.	209,430
				Total	**209,430**
		Contractor's Profit	20 %		41,886
		Total			**251,316**
		ITEM RATES			
		Composite rate Set		Rs.	**251,316**

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

Rate Analysis

Description

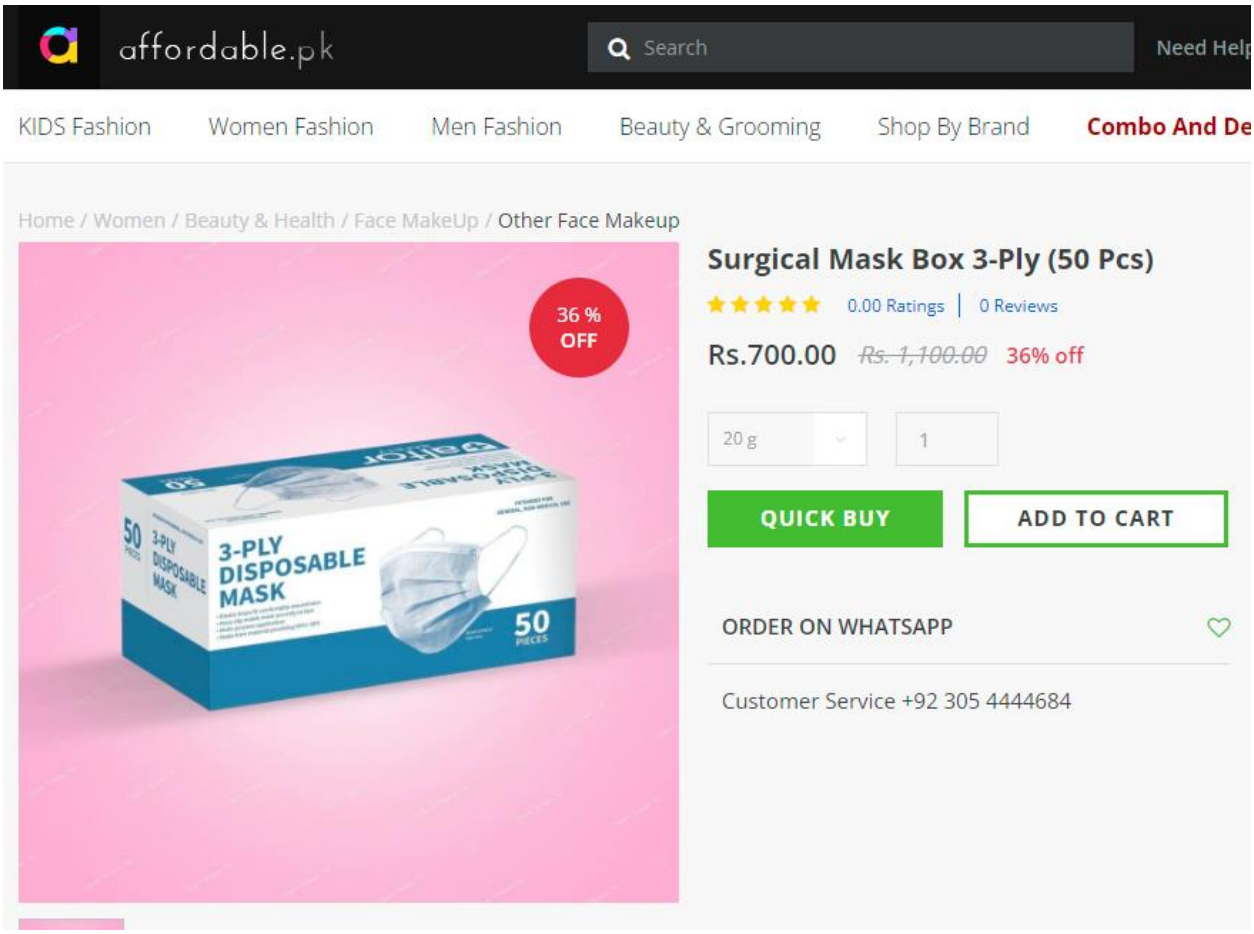
Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell 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 **Unit.** **Each**

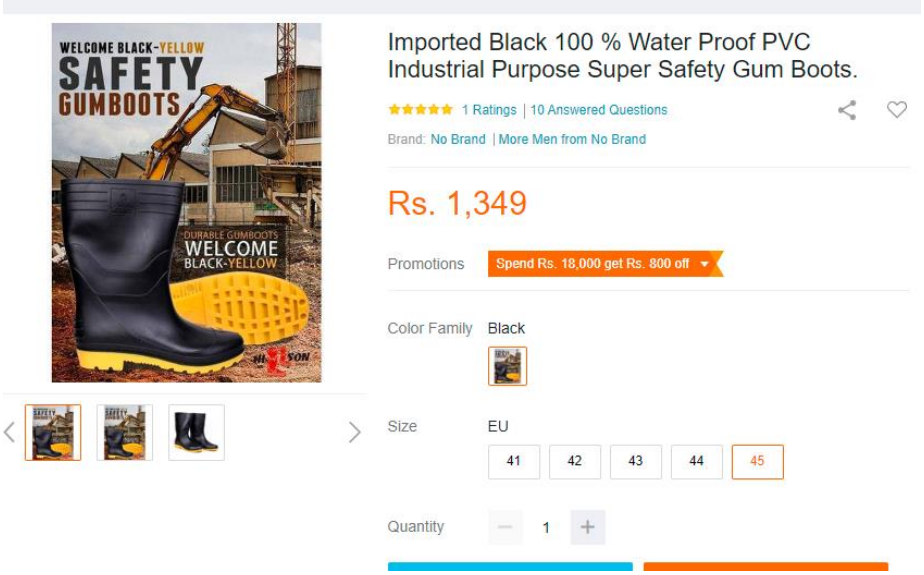
Sr. No.	Ref Input Rate	Detail	Unit Rate (British System) per Each						
					Qty		Rate Per Unit		Amount (Rs.)
1	MR	LCP			1.00	No	163,215	No.	163,215.00
								Total	**163,215.00**
		Contractor's Profit	20	%					32,643.00
		Total							**195,858**
		ITEM RATES							
		Composite rate Set						Rs.	**195,858**

Cost for PPEs from different Sources

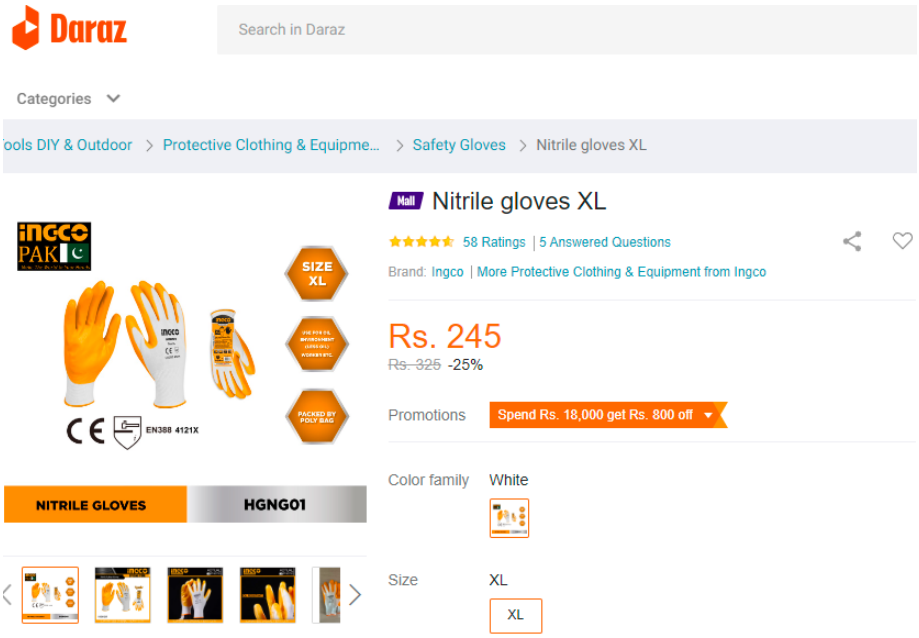
1. **Face Masks (3PLY)**



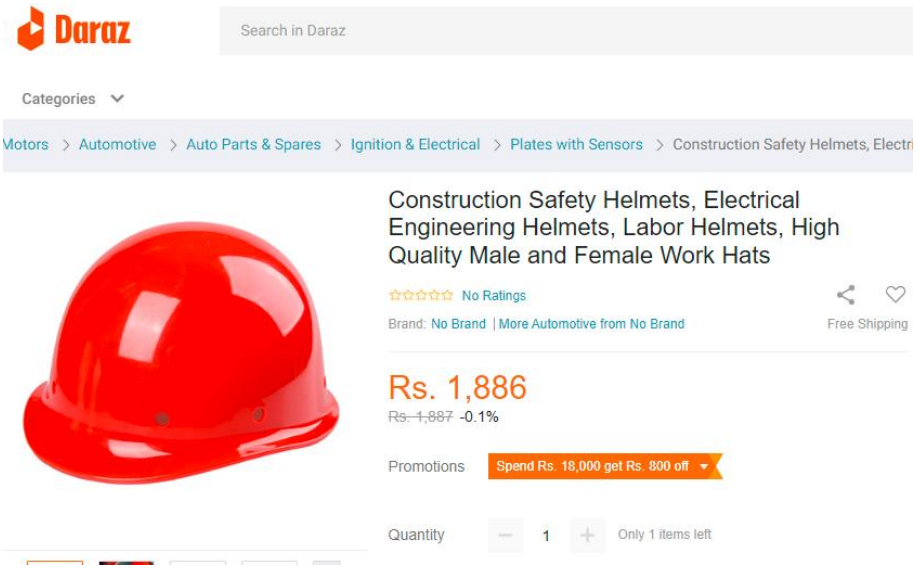
2. **Safety Gum Shoes**



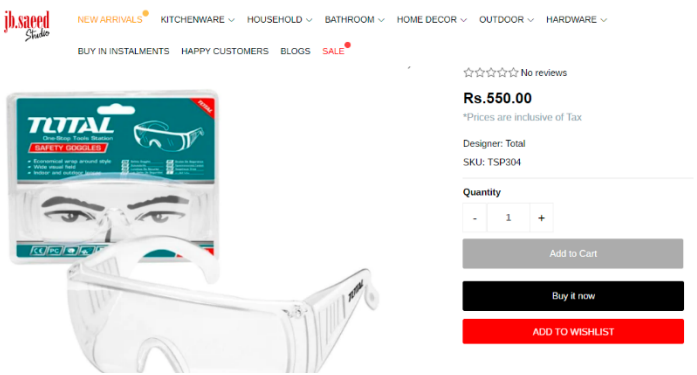
3. Hand Gloves



4. Safety Hard helmets



5. Safety Goggles



Product Specification:

- Conforms to ANSI Z87.1 and CE EN166
- Full-view full-slice structure prevents UV and withstands impact
- Fit to wearing the corrective glasses, also can be used as visitors glasses
- Can defend against splash particles in the round
- Packed by double blister

6. Reflective Safety Vest

PRESCOTT PSBV101 LARGE REFLECTION VEST

PRODUCT VIEWS: 658
- STOCK AVAILABILITY: In Stock
- MODEL: BEHR-2587

PRESCOTT

Rs540/-

1 ADD TO CART INQUIRY

ADD TO WISH LIST COMPARE THIS PRODUCT

Based on 1 reviews. Write a review

7. Infrared Thermometer

BENETECH GM-2200 INFRARED THERMOMETER

PRODUCT VIEWS: 904
- STOCK AVAILABILITY: In Stock
- MODEL: CPCB-10216

BENETECH

Rs40,000/-

1 ADD TO CART INQUIRY

ADD TO WISH LIST COMPARE THIS PRODUCT

Based on 1 reviews. Write a review

8. Fire Extinguishers

DCP FIRE EXTINGUISHERS, FIRE EXTINGUISHERS, FIRE FIG...
DCP Fire Extinguisher 12 Kg China
Rs4,200.00

DCP FIRE EXTINGUISHERS, FIRE EXTINGUISHERS, FIRE FIG...
DCP Fire Extinguisher 6 kg NAFFCO
Rs6,500.00

DCP FIRE EXTINGUISHERS, FIRE EXTINGUISHERS, FIRE FIG
6 KG DCP Fire Extinguisher Bavaria ...
Rs6,800.00

9. PVC Cones and Delineators

ROAD SAFETY PVC TRAFFIC CONES

PKR 950.00

10.Delineators with Chain

ROAD GUIDING PORTABLE DELINEATORS

PKR 1200.00

SAFETY TRAFFIC CHAIN

PKR 3700.00

ALI ENGINEERING SERVICES

PRICE SCHEDULE SHEET

QUOTE NO.	DATE	OFFER VALIDITY
QT-167-2K22	October 17, 2022	October 24, 2022

CLIENT:- **Jers Consultancy (Pvt) Ltd.**
24 Civic St, Township Twp Commercial Area,
Lahore - Pakistan.

SR. #	DESCRIPTION	QTY	UNIT	UNIT RATE	AMOUNT Rs.
1	20'/6 Mtrs. High Hot Dip Galvanized Pole with Base Plate etc. **(Single Arm)**	1	No.	39,780.00	39,780.00
2	20'/6 Mtrs. High Hot Dip Galvanized Pole with Base Plate etc. **(Double Arm)**	1	No.	42,705.00	42,705.00
TOTAL AMOUNT Rs: -					**82,485.00**

For **Ali Engineering Services**

MOHSIN PERVAIZ
Head Planning Div.

ALI SHAFQAT
Director Operations

Messer's,

JERS Consultancy Pvt Ltd
Lahore

Attention: Respected, Mr. Asad Khalid (Electrical Consultant)
Subject: Quotation for the Supply of L.T Switchgears. Punjab
Project: Cities Program (PCP)

Dear Sir,

We would like to take this opportunity of thanking you for your enquiry regarding supply of subject equipment. We are pleased to submit our most competitive offer as per BOQ & comprise on the followings.

Sr. No	Description of Item	Qty	Rate
1	LCP (FOR P1)	1 No.	296,946
2	LCP (FOR-P3)	1 No.	296,946
3	LCP (FOR-P4)	1 No.	251,316
4	LCP (FOR-P5)	1 No.	251,316
5	LCP (FOR P6)	1 No.	251,316
6	LCP (FOR P7) PART I	1 No.	251,316
7	LCP (FOR P7) PART II	1 No.	195,858
8	LCP (FOR P8)	1 No.	251,316

This offer is based on the following terms and conditions:

Prices are *in*cluding G.S.T @ 17%
Payments 50% advance with the award of contract, Balance 50% after final inspection before delivery.
Delivery period will be 03 to 04 Weeks after technically and financially conformed order.
Guarantee for the period of one year against any manufacturing defects & one year free services.

Thanking you and assuring you of our best services & co-operation at all time, we remain.

Yours Faithfully,

Mirza Hasan
Manager Marketing
0322-4555675

Malik Shahid S.M
C.E.O

Al Ghani Industrial Estate, Al-Asher Street, opposite Metro Bus Station#26, 20km Ferozepur Road, Lahore.
UAN: 111-786-774, Fax: 042-35950459
info@qualityswitchgears.com
www.qualityswitchgears.com

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)	40	40	40	40	40	40	40
2029	35	35	35	35	35	35	35
2037	30	30	30	30	30	30	30

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

Vehari (2.71km)

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	681	989	2.87
2029	4.57	1158	989	5.24
2037	5.05	2084	989	10.41
Cars				
Base Year(2022)	39.47	198	989	7.73
2029	42.43	337	989	14.13
2037	47.21	606	989	28.29
Wagons				
Base Year(2022)	43.08	585	989	24.93
2029	47.89	995	989	47.11
2037	57.04	1790	989	100.99
Bus				
Base Year(2022)	82.34	12	989	0.98
2029	97.79	20	989	1.97
2037	97.79	37	989	3.55
T.Trolly + Trucks 2-AXLE				
Base Year(2022)	86.88	17	989	1.46
2029	103.44	29	989	2.96
2037	103.44	52	989	5.32
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	92.52	3	989	0.27
2029	109.08	5	989	0.55
2037	109.08	9	989	0.99
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	98.16	0	989	-
2029	114.72	0	989	-
2037	114.72	0	989	-
TOTAL				
Base Year(2022)				**38.24**
2029				**71.95**
2037				**149.56**

Note :"VOC" means Vehicle Operating Cost

TABLE - 9.7

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	681	989	1.78
2029	2.72	1158	989	3.12
2037	2.84	2084	989	5.86
Cars				
Base Year(2022)	19.16	198	989	3.75
2029	19.92	337	989	6.63
2037	21.00	606	989	12.59
Wagons				
Base Year(2022)	18.83	585	989	10.90
2029	19.67	995	989	19.35
2037	20.80	1790	989	36.83
Bus				
Base Year(2022)	36.21	12	989	0.43
2029	37.40	20	989	0.75
2037	39.13	37	989	1.42
T.Trolly + Trucks 2-Axle				
Base Year(2022)	22.77	17	989	0.38
2029	23.75	29	989	0.68
2037	25.05	52	989	1.29
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	34.85	3	989	0.10
2029	37.60	5	989	0.19
2037	41.08	9	989	0.37
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	39.06	3	989	0.12
2029	41.80	5	989	0.21
2037	45.28	9	989	0.41
TOTAL				
Base Year(2022)				**17.47**
2029				**30.94**
2037				**58.77**

Note :"VOC" means Vehicle Operating Cost

TABLE - 9.8

(Million Rs.)

YEARS	VEHICLE OPERATING COSTS		SAVINGS
	WITHOUT PROJECT	WITH PROJECT	
Base Year(2022)	38.24	17.47	20.78
2029	71.95	30.94	41.02
2037	149.56	58.77	90.79
		TOTAL	**152.58**

TABLE - 9.9

Vehari (2.71km)

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	681	989	2.67
2029	4.95	1158	989	5.67
2037	6.60	2084	989	13.61
Cars				
Base Year(2022)	14.85	198	989	2.91
2029	18.56	337	989	6.18
2037	24.75	606	989	14.83
Wagons				
Base Year(2022)	29.70	585	989	17.19
2029	39.60	995	989	38.96
2037	59.41	1790	989	105.19
Bus				
Base Year(2022)	39.48	12	989	0.47
2029	52.64	20	989	1.06
2037	78.96	37	989	2.87
T.Trolly + Trucks 2-Axle				
Base Year(2022)	5.78	17	989	0.10
2029	8.66	29	989	0.25
2037	8.66	52	989	0.45
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	5.78	3	989	0.02
2029	8.66	5	989	0.04
2037	8.66	9	989	0.08
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	5.78	3	989	0.02
2029	8.66	5	989	0.04
2037	8.66	9	989	0.08
TOTAL				
Base Year(2022)				**23**
2029				**52**
2037				**137**

Note :"VOT" means value of Travel Cost

TABLE - 9.10

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	681	989	1.78
2029	2.72	1158	989	3.12
2037	2.84	2084	989	5.86
Cars				
Base Year(2022)	19.16	198	989	3.75
2029	19.92	337	989	6.63
2037	21.00	606	989	12.59
Wagons				
Base Year(2022)	18.83	585	989	10.90
2029	19.67	995	989	19.35
2037	20.80	1790	989	36.83
Bus				
Base Year(2022)	36.21	12	989	0.43
2029	37.40	20	989	0.75
2037	39.13	37	989	1.42
T.Trolly + Trucks 2-Axle				
Base Year(2022)	22.77	17	989	0.38
2029	23.75	29	989	0.68
2037	25.05	52	989	1.29
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	34.85	3	989	0.10
2029	37.60	5	989	0.19
2037	41.08	9	989	0.37
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	39.06	3	989	0.12
2029	41.80	5	989	0.21
2037	45.28	9	989	0.41
TOTAL				
Base Year(2022)				**17.47**
2029				**30.94**
2037				**58.77**

Vehari (2.71km)

(Million Rs.)

YEARS	ANNUAL VALUE OF TRAVEL TIME COST (VOTT)		SAVINGS
	WITHOUT PROJECT	WITH PROJECT	
Base Year(2022)	23.36	17.47	5.90
2029	52.21	30.94	21.27
2037	137.10	58.77	78.33
		TOTAL	**105.50**

TABLE - 9.12

TOTAL PROJECT BENEFITS

(Million Rs.)

YEARS	SAVINGS		TOTAL SAVINGS
	VOC	VOTT	
Base Year(2022)	20.78	5.90	26.68
2029	41.02	21.27	62.29
2037	90.79	78.33	169.12
		TOTAL	**258**

TABLE - 9.13
Vehari (2.71km)
Calculation of Economic Internal Rate of Return

Million Rs.

Years	PROJECT ECONOMIC COSTS			Project Economic Benefits	**Sensitivity Analysis**			
	Investment	O & M	Total Costs		**(a)**	**(b)**	**(c)**	**(d)**
1	148.34	0.00	148.34	0.00	-148.34	-148.34	-163.17	-163.17
2		0.74	0.74	26.68	25.94	23.27	25.86	23.19
3		0.74	0.74	30.68	29.94	26.87	29.86	26.79
4		0.74	0.74	35.28	34.54	31.01	34.46	30.94
5		0.74	0.74	40.57	39.83	35.77	39.76	35.70
6		0.74	0.74	46.66	45.92	41.25	45.84	41.18
7		0.74	0.74	53.66	52.92	47.55	52.84	47.48
8		0.74	0.74	61.71	60.96	54.79	60.89	54.72
9		0.74	0.74	70.96	70.22	63.12	70.15	63.05
10		0.74	0.74	81.61	80.86	72.70	80.79	72.63
Total :	148.34	6.68	155.02	447.80	292.78	248.00	277.28	232.50

DISCOUNT RATES	**PRESENT WORTH OF COST**		**Present Worth of Benfefit**	**NET PRESENT WORTH**			
10 %	134.85	138.74	190.88	99.86	76.00	85.99	62.13
12 %	132.45	135.97	170.59	77.27	55.94	63.67	42.35
18 %	125.71	128.42	124.72	27.48	11.89	14.64	-0.95
20 %	123.62	126.11	113.19	15.37	1.23	2.76	-11.38
ECONOMIC INTERNAL RATE OF RETURN 12% DR				23.06	20.25	20.51	17.83
BENEFIT COST / RATIO AT 12 % D.R			1.25				

* 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 & CHOWKS IN VEHARI CITY (2022-2023)

Road No.	Road Name	May - 23				Jun - 23				Jul - 23				Aug - 23			
P7	Railway Crossing to Canal Road & Club Road to Chungi No.6 Chowk.																
P8	People Colony Road																

Annexure-E

EIA Report

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: Mr. Iftikhar Shirazi / Mr Shoaib Iqbal

Name of MC: Unit Kohari

Sub-Project Sector: Roads

Sub-Project Title: (P-7) - Multan road railway crossing to canal road (0.75 km) club road to (old NADRA road) chungi # (1.00 km) Total = (1.75 km

Sub- Project Categorization:

E-1	S-1
E-2	S-2
(E-3)	(S-3)

Date of Screening: 1/6/22

Anticipated Project Activities

Rehabilitation of existing road -

Estimated Cost of Subprojects

Completion Time/Duration

Estimated Labor for Subproject

---

[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		✓	Not observed –
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project[3]	✓		canal observed Near the Proped road –
Estuarine		✓	Not observed
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	✓		Wildlife Park Vehari observed –
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]	✓		Imam Bargh, Ali Mosque – Mosque, Jamia Masjid Haggani
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project[5]		✓	Not observed
Any graveyard of local community (Muslims or Christians)		✓	"
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)?		✓	Urban landscape already built area densily populated –
Already existing infrastructure [7](including public amenities) which may be required to dismantle or may be affected temporarily by any means?	✓		Already road will be dismatled –
B. Potential Environmental Impacts Will the Sub-Project cause…			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?	✓		construction activities may cause disturbance.
2. Cutting of trees?		✓	Not Envolved –

[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.

3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	Not anticipated
4. Generation of wastewater during construction or operation?		✓	"
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?	✓		construction activities may cause surface pollution to canal -
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?		✓	Not anticipated
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?	✓		During construction phase - impact is anticipated -
8. Over pumping of ground water, leading to salinization and ground subsidence?		✓	Not anticipated
9. Serious contamination of soil due to construction works?		✓	"
10. Aggravation of solid waste problems in the area?	✓		During construction phase -
11. Generation of hazardous waste?		✓	Not anticipated -
12. Increased air pollution due to sub-project construction and operation?	✓		During construction phase -
13. Noise and vibration due to sub-project construction or operation?	✓		"
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		✓	Not anticipated
15. Use of chemicals during construction?	✓		Bitumen, Paints etc -
C: Potential Social Impacts Will the Sub-Project cause…			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?	✓		Disfiguration of PCRs is not anticipated -
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	Involuntary resettlement is not anticipated -

3. Disproportionate impacts on the poor, women and children and or other vulnerable groups [8](mentioned above)?		✓	Not anticipated
4. Temporary impediments in movements of people/transport and animals?	✓		During construction phase
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		✓	Not anticipated
6. Social conflicts if workers from other areas are hired?		✓	"
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	✓		EHS SOPs will be Implemented (PCP)
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	✓		"
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		✓	Not anticipated
10. Any impact on sensitive receptors (mentioned above)		✓	"
11. Any impact of negative nature on already existing infrastructure including public amenities		✓	"

Prepared By: DMO(I&S)

Name: IFTIKHAR AHMAD SHERAZI

Signature:

Date:

DMO (I & S)
Unit Vehari
District Council Vehari

Endorsed By: DPO-ESM

Name: UMAR FAROOQ

Signature:

Date: 1/6/22

[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

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: Mr Iftikhar Shirazi / Mr Shoaib Iqbal

Name of MC: Unit Vehari

Sub-Project Sector: Roads

Sub-Project Title: (P-8) Imam bargh road to Tanki chowk People's Colony (1.5 km)

Sub- Project Categorization:

	E-1	**S-1**
	E-2	**S-2**
	E-3	**S-3**

Date of Screening: 1/6/22

Anticipated Project Activities

Rehabilitation of existing road -

Estimated Cost of Subprojects

Completion Time/Duration

Estimated Labor for Subproject

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[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		✓	Not observed
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]	✓		→ Jamia Masjid Rehmania → Ali Mosque –
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project[5]		✓	Not observed
Any graveyard of local community (Muslims or Christians)		✓	"
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)?		✓	Highly crowded area
Already existing infrastructure [7](including public amenities) which may be required to dismantle or may be affected temporarily by any means?	✓		Already built road alignment.
B. Potential Environmental Impacts Will the Sub-Project cause…			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	Not anticipated
2. Cutting of trees?		✓	"

[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.

3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	Not anticipated
4. Generation of wastewater during construction or operation?		✓	"
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		✓	"
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?		✓	"
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		✓	"
8. Over pumping of ground water, leading to salinization and ground subsidence?		✓	"
9. Serious contamination of soil due to construction works?		✓	"
10. Aggravation of solid waste problems in the area?	✓		Construction waste -
11. Generation of hazardous waste?		✓	
12. Increased air pollution due to sub-project construction and operation?	✓		During construction Phase
13. Noise and vibration due to sub-project construction or operation?	✓		"
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		✓	Not antici
15. Use of chemicals during construction?	✓		Bichuman, Paint -
C: Potential Social Impacts Will the Sub-Project cause…			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		✓	Not anticipated
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	"

3. Disproportionate impacts on the poor, women and children and or other vulnerable groups [8](mentioned above)?		✓	Not anticipated
4. Temporary impediments in movements of people/transport and animals?	✓		During construction phase.
5. Large population influx during sub-project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		✓	"
6. Social conflicts if workers from other areas are hired?		✓	"
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	✓		EHS SOPs will be Implemented (PCP) -
8. Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	✓		"
9. Community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		✓	Not anticipated
10. Any impact on sensitive receptors (mentioned above)		✓	"
11. Any impact of negative nature on already existing infrastructure including public amenities		✓	"

Prepared By: DMO(I&S)

Name: IFTIKHAR AHMAD SHERAZI

Signature:

Date:

D.M.O (I & S)
Unit Vehari
District Council Vehari

Endorsed By: DPO-ESM

Name: UMAR FAROOQ

Signature:

Date: 1/6/22

[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

PUNJAB CITIES PROGRAM

ENVIRONMENT, HEALTH AND SAFETY SOPs FOR LABOR/WORKERS

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

Table 1: Construction Camp Management

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

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

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

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

Activity/ Impact Source	EHS Concerns/issues	Mitigation Measures/ Management Guidelines
		Restore the site to its original condition or to an agreed condition with the landowner defined prior to the commencement of the works (in writing). Not make false promises to the laborers for future employment in O&M of the project.

Table 2: Cultural and Religious Issues

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

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

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

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

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

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

Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
Accidents	Lack of first aid facilities and health care facilities in the immediate vicinity will aggravate the health conditions of the victims	Provide health care facilities and first aid facilities are readily available. Appropriately equipped first-aid stations should be easily accessible throughout the place of work Document and report occupational accidents, diseases, and incidents. Prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, so far as reasonably practicable, the causes of hazards. In a manner consistent with good international industry practice. Identify potential hazards to workers, particularly those that may be life-threatening and provide necessary preventive and protective measures. Provide awareness to the construction drivers to strictly follow the driving rules Provide adequate lighting in the construction area and along the roads
Water and sanitation facilities at the construction sites	Lack of Water sanitation facilities at construction sites cause inconvenience to the construction workers and affect their personal hygiene.	The contractor shall provide separate portable toilets and hand washing facilities at the construction sites, if about 25 people are working the whole day for a month. Location of portable facilities should be at least six m away from storm drain system and surface waters. These portable toilets should be cleaned once a day and all the sewerage should be pumped from the collection tank once a day and should be brought to the common septic tank for further treatment. Contractor should provide bottled drinking water facilities to the construction workers at all the construction sites.
Other issues	Potential risks on health and hygiene of construction workers and general public	The Contractor shall follow the following management measures to reduce health risks to the construction workers and nearby community: Drainage Management Air Quality Management Noise and Vibration Management Road Transport and Road Traffic Management
Trainings	Lack of awareness and basic knowledge in health care among the construction workforce, make them susceptible to potential diseases.	The Contractor shall: Train all construction workers in basic sanitation and health care issues (e.g., how to avoid COVID-193, malaria and transmission of sexually transmitted infections (STI) HIV/AIDS. Train all construction workers in general health and safety matters, and on the specific hazards of their work Training should consist of basic hazard awareness, site specific

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

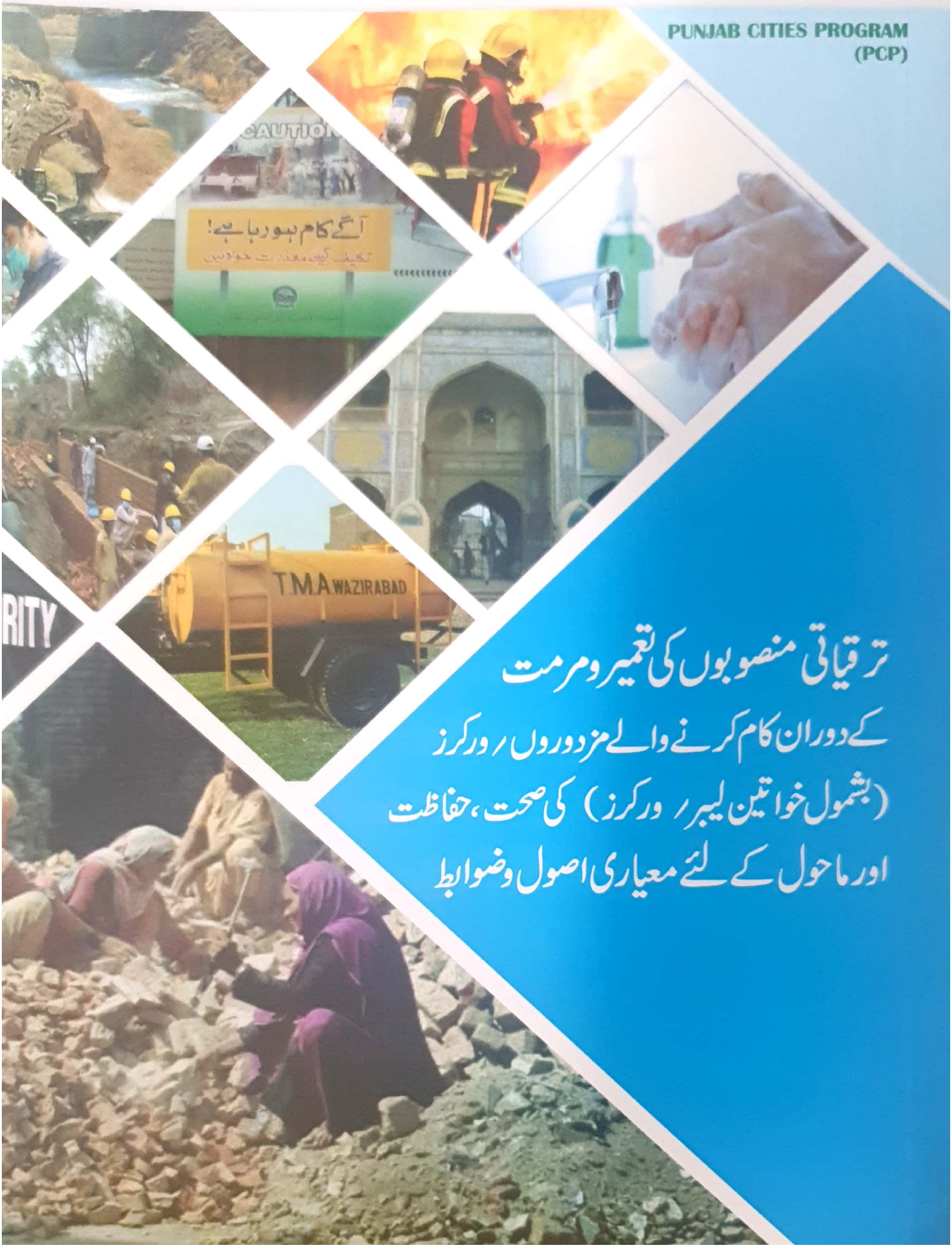
Activity/ Impact Source	Impacts	Mitigation Measures/ Management Guidelines
		hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Commence the COVID-19, malaria, HIV/AIDS and STI education campaign before the start of the construction phase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

Table 4: Summary of Recommended Personal Protective Equipment According to Hazard[4]

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

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

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

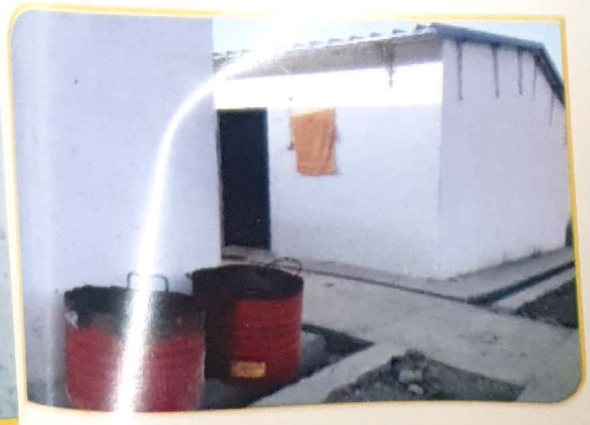
ٹھیکیدار کیمپ سائٹس پر درج ذیل باتوں کا خیال رکھے گا:

- 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

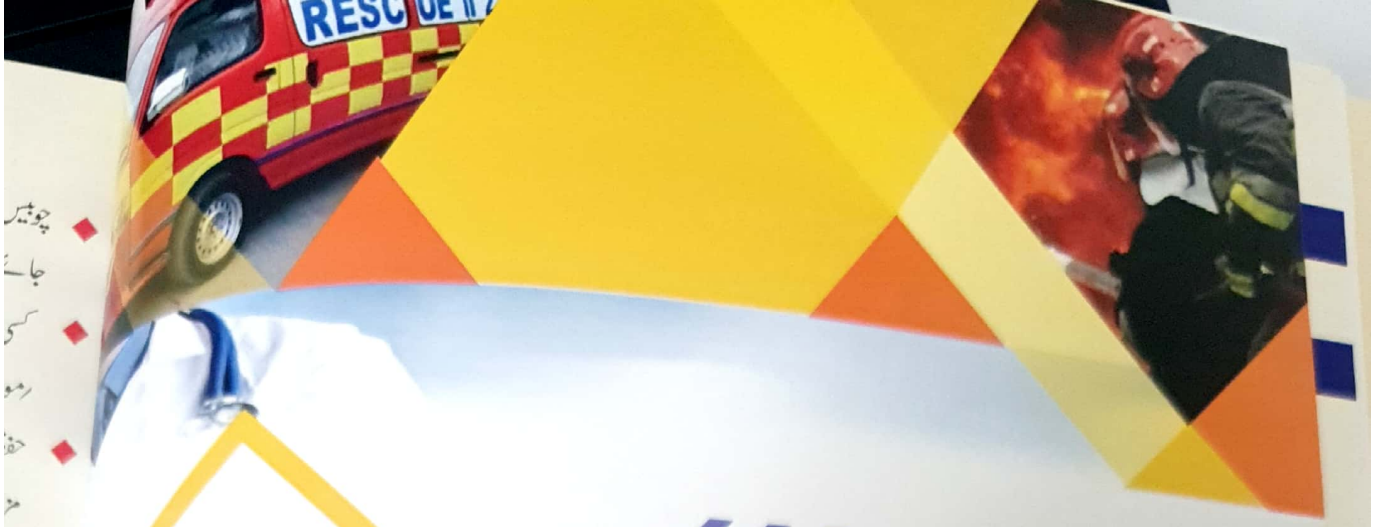
مسائل

- 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

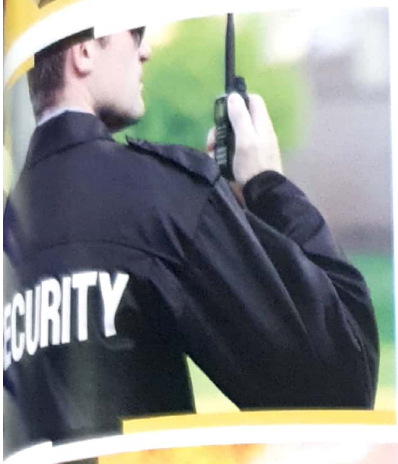
- حفظان صحت کے رہنما اصولوں پر عملدرآمد کرنے کی صورت میں مختلف بیماریاں مثلاً کرونا وائرس ، ملیریا ، ایچ آئی وی ایڈز اور دیگر انفیکشنز کے پھیلنے کا خطرہ

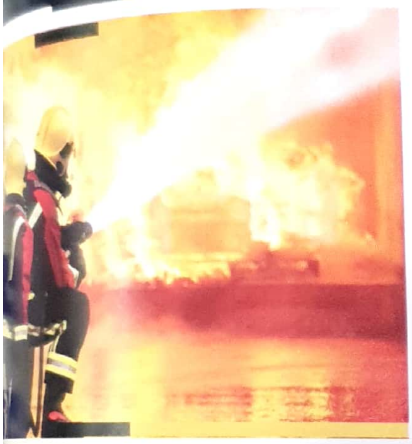
حفاظتی اقدامات

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

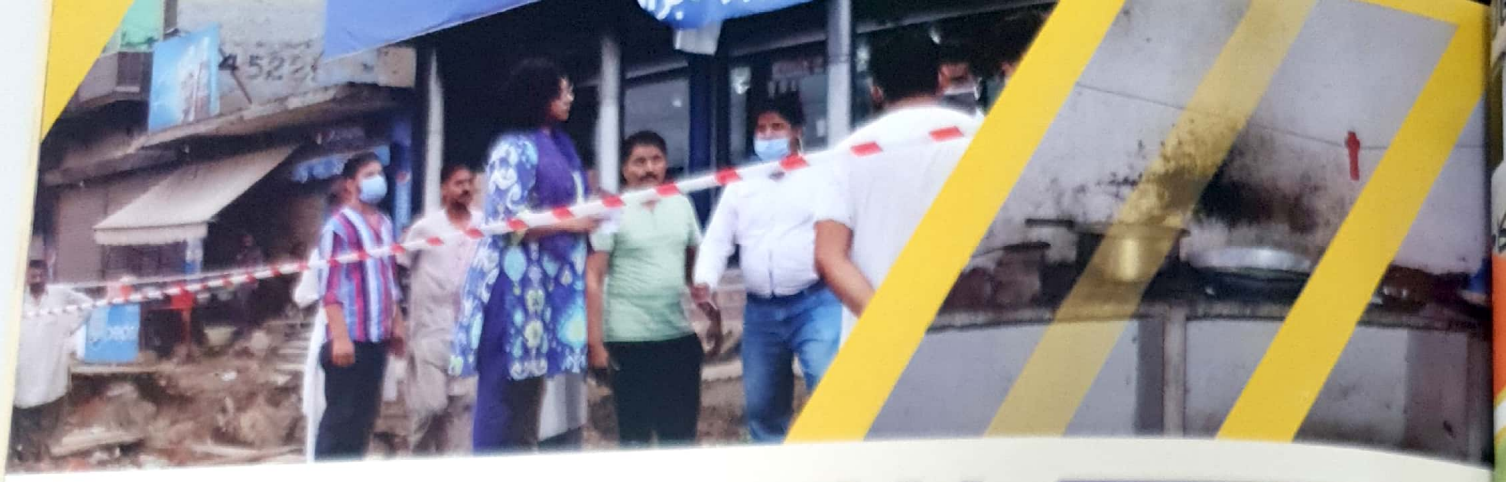
۷۔ سکیورٹی اور حفاظت کی سہولیات

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

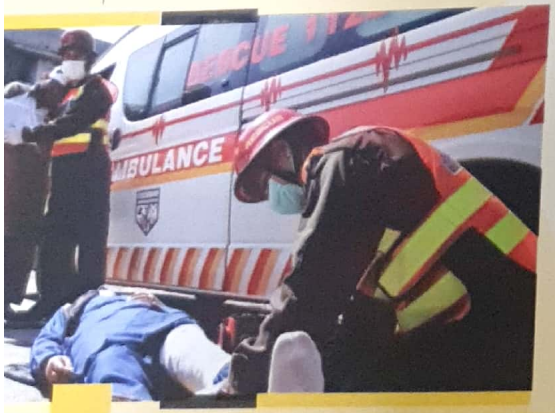
۳۔دوران تعمیر حادثات کا پیش آنا

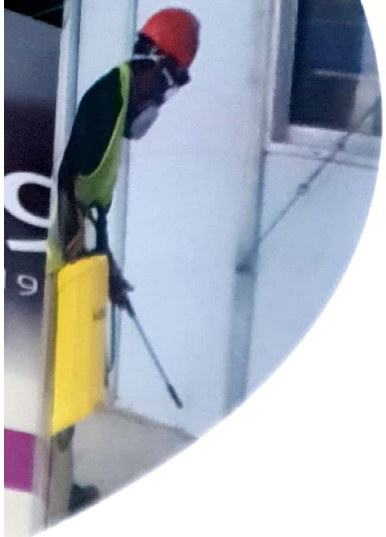
مسائل

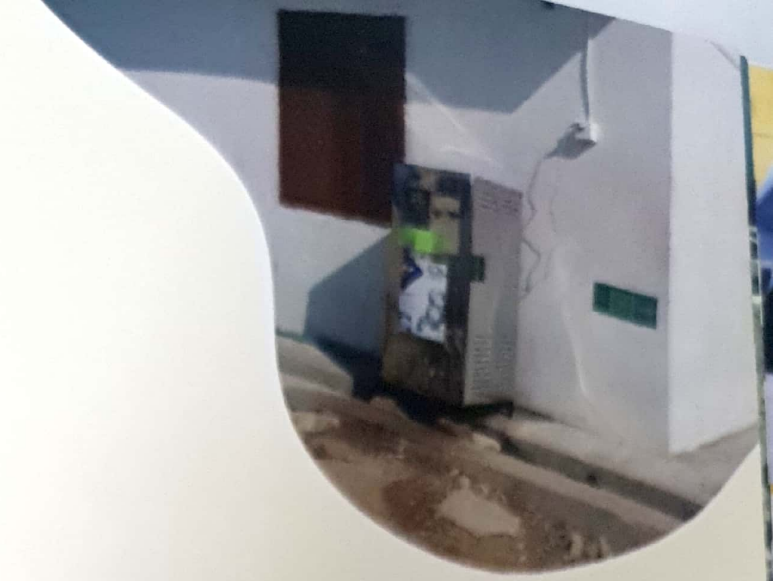
- فوری طبی امداد کی کمی
- اردگرد کے علاقوں میں ابتدائی طبی سہولیات اور صحت عامہ کا فقدان

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

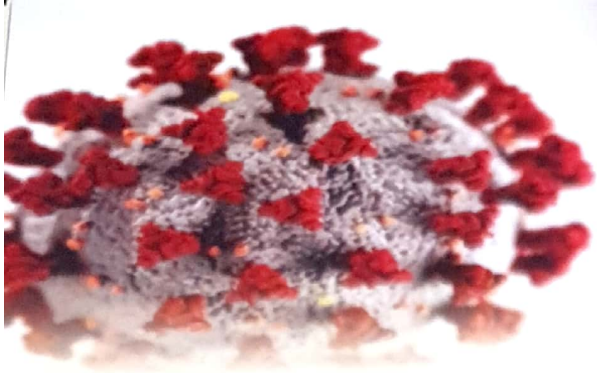
٤.تعمیراتی مقامات پر پانی اور صفائی ستھرائی کی سہولیات اور سالڈ ویسٹ مینجمنٹ

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

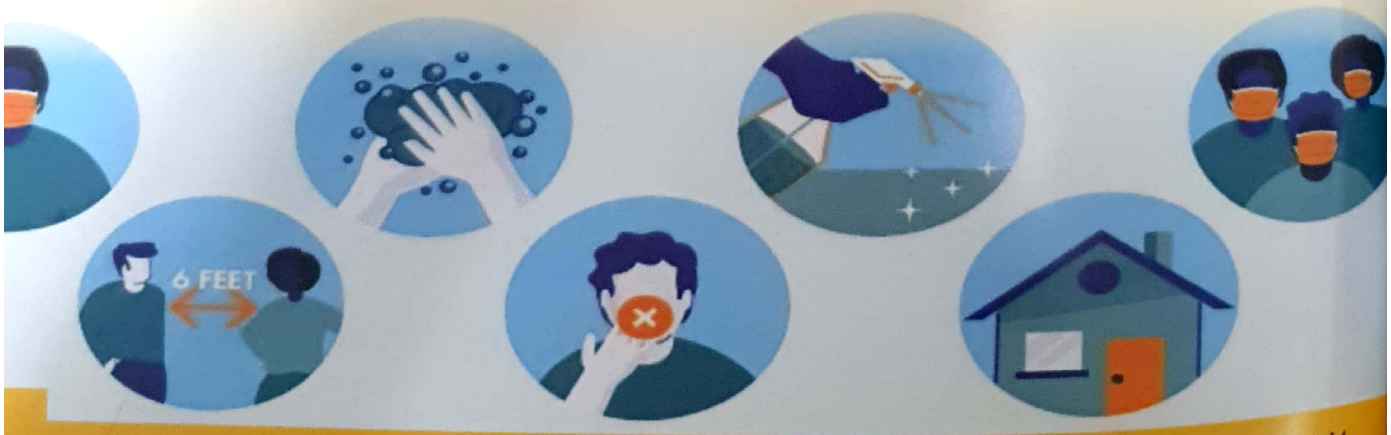
سرگرمیاں

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

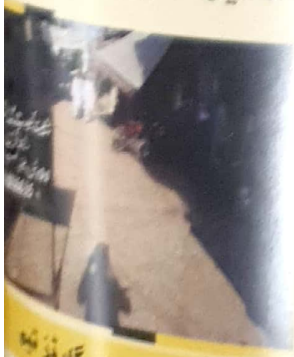
مسائل

- 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