

#### **Local Government & Community Development Department**

**Punjab Cities Program** Improvement and Rehabilitation of **Roads & Chowks** 

in MC Wazirabad

### PC-I

Estimated Cost PKR 200.89 Million

November 2022

**Municipal Committee Wazirabad** 



#### JERS CONSULTANCY (PVT) LTD

(Formely Jers Engineering Consultants)

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

Tel: +92 42 35113123, +92 42 35113124 Fax: +92 42 35113125

E-mail: info@jers.com.pk mail@jers.com.pk Web: http://www.jers.com.pk





#### **Punjab Cities Program**

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#### **PC-I FORM**

#### for

### Improvement & Rehabilitation of Roads & Chowks Project in Wazirabad City

#### Project Serial Number

Sector: Local Government & Community Development Department

Sub Sector: Social

	Punjab Cities Program			
1. Name of the project	Improvement & Rehabilitation of Roads & Chowks Project			
	in Wazirabad city			
2.Location	Wazirabad is situated on the banks of the Chenab River nearly 100 kilometres north of Lahore on the Grand Trunk Road. It is 45 kilometres from Sialkot, 30 kilometres from the district capital - Gujranwala and about 12 kilometres from Gujrat. The city is located at a distance of 190 Kilometres from Islamabad on the Grand Trunk Road. It has 32°26′ North latitude and 74° 07′ East longitude and elevation of 230 meters (755 feet) above mean sea level.  Location map of the city is attached in <b>Annexure-A</b>			
3. Authorities responsible	e for			
i- Sponsoring	Government of the Punjab (through World Bank	funding)		
ii- Execution	Municipal Committee Wazirabad			
iii- Operation and Maintenance	Municipal Committee Wazirabad			
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	Total loan from World Bank  Component-1 Infrastructure development (PforR)  Component-2 Technical Assistance  MCs share (20% of PforR component) equivalent to:  Total Program cost	USD 200.00 million USD 180.00 million USD USD 20.00 million USD 36.00 million 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 2021-22 - under General Serial No-2521 with allocation of PKR 100.00 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.100.00 million under ADP 2021-22 General Serial No 2521 for Component-2 of the Program i-e Technical Assistance as described above.
5. Project objectives and its relationship with sector objectives	<ol> <li>Sector Objectives         The sector objectives include:     </li> <li>Provision of efficient and effective municipality services to the masses.</li> <li>Community development through improving basic infrastructure.</li> <li>Clean and green environment for better living standards.</li> <li>Effective use of land through master planning of urban areas.</li> <li>Social uplifting and cohesion through provision of public open spaces and play grounds.</li> <li>Ease in mobility and communication.</li> <li>Cost efficient Solid Waste Management through waste to energy initiatives.</li> <li>Capacity building of Local Governments.</li> <li>Efficient Road network to make areas easily accessible</li> <li>Objectives of the Project</li> <li>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.</li> <li>Scope of the work for this particular project includes the rehabilitation</li> </ol>
	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 Wazirabad from their own resources.

The Project has the following objectives;

- 1. Improvement of service delivery level of the municipal services in the sector of communication.
- 2. Better travelling facilities for the commuters.
- 3. Reduction in road accidents.
- 4. Saving in travelling and repair cost of the vehicles.
- 5. Reduction in annual maintenance charges of roads and parks
- 6. Better lit roads and streets adding to security of people travelling at night.
- 7. Improvement in environments of the city making them livable.
- 8. Improvement in local and province economy.
- 9. Improvement in the economic growth potential of the city.

Hence, the objectives of the project are in line with the sector objectives mentioned at Sr. No-1, 2, 3, 5 and 6 above and the project forms integral part of the concerned sector.

#### 6. Description, justification, technical parameters and technology transfer aspects

#### i. Present Condition

As per PLGA-12019 Urban Local Governments (ULGs) are basically and wholly responsible for delivery of the municipal services with a service delivery level which should satisfy the consumers and citizen. Unfortunately, the prevalent conditions of the service delivery are not encouraging in the city.

The major reason of unsatisfactory service delivery is the lack of proper maintenance of the municipal infrastructure in all sectors causing consumer dissatisfaction at one end and degradation of the infrastructure on the other end apart from very low revenue recovery as the consumers are reluctant to pay because of deteriorated service delivery.

The roads infrastructure has been damaged and degraded because of lack of repairs and upgradation due to shortage of money and constrained municipal budgets. If these roads & chowks are not improved at this stage, then this infrastructure will be further damaged / degraded giving financial loss to the public as well as private sectors and the growth potential of the city will be adversely affected. Damaged roads will increase the operational expenditure of the vehicles apart from wasting time and giving rise to public frustration and mental agony.

The only way to keep the infrastructure in operational and functional condition for better travelling and recreational facilities to the inhabitants

r	of the city and the surrounding areas, is to improve the roads, chowks and important cross roads					
The project comprises of improvement of <b>04 Nos</b> damaged roads with total length of <b>5.72 Km</b> and <b>02 Nos chowks</b> in the city. Detail of these roads has been given in the table below.						
con	The detail of roads and chowks to be improved, rehabilitated or constructed in the city, is given below					
S. N.	Name of road	From-To	Detail of works involved			
1	P1-Arif Shaheed Road & Double Railway crossing road	Telephone Exchange Chowk to Railway Crossing Nizamabad & HBL to Allahwala Chowk Via Double Railway	<ul> <li>Geometric Improvement</li> <li>Rehabilitation of Existing Pavement Structure</li> <li>Pavement Marking</li> <li>Street Lighting</li> <li>Improvement of drainage system</li> </ul>			
2	P2-Awa Road	City Park to Dhounkal Road	<ul> <li>Geometric Improvement</li> <li>Rehabilitation of Existing Pavement Structure</li> <li>Pavement Marking</li> <li>Street Lighting</li> <li>Improvement of drainage system</li> </ul>			
3	P7- Western Circular Road	Veterinary Hospital to G.T Road via Railway Station	<ul> <li>Geometric Improvement</li> <li>Rehabilitation of Existing Pavement Structure</li> <li>Pavement Marking</li> <li>Street Lighting</li> <li>Improvement of drainage system</li> </ul>			
4	P8- Bank of Nallah Palkhu & Railway Colony Road	G.T Road to Bypass Road via Slaughter House & Railway Colony Road	<ul> <li>Geometric Improvement</li> <li>Rehabilitation of Existing Pavement Structure</li> <li>Pavement Marking</li> <li>Improvement of drainage system</li> </ul>			
	The con Im S. N.	total length of 5.72 I roads has been giver  The detail of roads constructed in the city Improvement and constructed in the ci	total length of 5.72 Km and 02 Nos chow roads has been given in the table below.  The detail of roads and chowks to be constructed in the city, is given below  Improvement and construction of roads S. Name of road P1-Arif Shaheed Road Shah			

	• (	Chowks or Cross Roads			
	S. N.	Name of Chowk			
	1	CP-2 Telephone Exchange Chowk	<ul> <li>Geometric Improvement of intersection</li> <li>Channelization of traffic flow</li> <li>Rehabilitation of Existing Pavement Structure</li> <li>Pavement Marking</li> <li>Street Lighting</li> <li>Aesthetic improvement of chowk</li> </ul>		
	2	CP-3 Haji Pura Chowk	<ul> <li>Geometric Improvement of intersection</li> <li>Channelization of traffic flow</li> <li>Rehabilitation of Existing Pavement</li> </ul>		
iv Indicate governess issues of the sector relevant to the project and strategy to resolve them	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<ul> <li>Municipal Committee Wazirabad 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.</li> <li>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.</li> </ul>			

7- Capital Cost of	The summary of the works included in the project is given below;				
Project			Cont		
	S. No	Name of road	Cost (PKR million)		
	1	P1-Arif Shaheed Road & Double Railway crossing road	39.16		
	2	P2-Awa Road	6.30		
	3	P7- Western Circular Road	37.42		
	4	P8- Bank of Nallah Palkhu & Railway Crossing	30.96		
	5	CP-2 Telephone Exchange Chowk	6.64		
	6	CP-3 Haji Pura Chowk	7.20		
	7	Drainage System	16.25		
		Electrical Works	39.30		
	8	Environment Health Safety Budget	1.64		
		Total	187.75		
	9	Contingencies @2%	3.75		
	10	Punjab Sales Tax @5%	9.38		
		Grand Total	200.89		
	See An	nexure-B for details			
i- Indicate date of estimation of the project cost	The project estimates have been framed during the month of August, 2022				
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 Gujranwala 2 <sup>nd</sup> biannual of year 2022).  For items not available in the MRS, the same have been analyzed as per prevailing market rates.				

iii- Provide year wise
estimation of
physical activities

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

S. #	Name of road / chowk	Year 2022-2023
1	P1-Arif Shaheed Road & Double Railway crossing road	100%
2	P2-Awa Road	100%
3	P7- Western Circular Road	100%
4	P8- Bank of Nallah Palkhu & Railway Crossing	100%
5	CP-2 Telephone Exchange Chowk	100%
6	CP-3 Haji Pura Chowk	100%

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

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

(All figures are in million rupees)

S. #	Items of Road/chowk	Total (PKR million)	Year 2022-2023 (100%)
1	P1-Arif Shaheed Road & Double Railway crossing road	39.16	39.16
2	P2-Awa Road	6.30	6.30
3	P7- Western Circular Road	37.42	37.42
4	P8- Bank of Nullah Palkhu & Railway Crossing	30.96	30.96
5	CP-2 Telephone Exchange Chowk	6.64	6.64
6	CP-3 Haji Pura Chowk	7.20	7.20
7	Drainage System	16.25	16.25
8	Electrical Works	39.30	39.30
9	Environment Health Safety Budget	1.64	1.64
	Total work outlay	187.75	187.75
10	PST, contingencies, public awareness and Horticulture	13.13	13.13
	Total project cost (Millions)	200.89	200.89

#### 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 Wazirabad out of its own financial resources. No additional cost will be required after completion of the improvement and upgradation of the roads and chowks, rather the repairs cost will be reduced for the initial years. However, the efficiency of the infrastructure and service delivery level will be improved after completion of the project.

### 9- Demand & Supply Analysis

#### **Existing supply level**

i- Existing Capacity of services

- 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 Wazirabad 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 Wazirabad city. Projected traffic of 4 project roads for 10 year is 151 million. Project roads of MC Wazirabad 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	Carriag eway Type	Metaled Width	Leng th
1	P1-Arif Shaheed Road & Double Railway crossing road	Telephone Exchange Chowk to Railway Crossing Nizamabad & HBL to Allahwala Chowk Via Double Railway	Asphalt Concrete & Tuff Paver	38 ft (Varies)	Single	32 ft (varies)	2.30 km
2	P2-Awa Road	City Park to Dhounkal Road	Tuff Paver	17 ft (Varies)	Single	-	0.53 km
3	P7- Western Circular Road	Veterinary Hospital to G.T Road via Railway Station	Asphalt Concrete & Tuff Paver	27 ft (varies)	Single	-	1.19 km
4	P8- Bank of Nallah Palkhu & Railway Colony Road	G.T Road to Bypass Road via Slaughter House	Asphalt Concrete	16 ft	Single	16 ft	1.7 km

	<ol> <li>One 3 legs chowk (CP-2 Telephone Exchange Chowk), connecting with Sialkot-Wazirabad Road &amp; Circular Road, second 6 leg Chowk (CP-3 Haji Pura Chowk) connecting with Sialkot Wazirabad Road, Daska Wazirabad Road &amp; Govt College Road.</li> <li>Roads and chowk are designed for 10-year life.</li> <li>These roads will carry out the 151 Million traffic cumulatively for 10 years.</li> <li>Improvement of these roads and chowk will decrease the travel time of commuters which will ultimately improve the economy of city.</li> </ol>			
10. Financial Plan	Below given loan for the Punjab Cities Pr	rogram l	nas been funded by	
Sources of	World Bank for 16 PCP cities in Punjab.	Ţ		
financing	Total loan to Government of Pakistan/Punja		USD 200 million	
<u>Debt</u>	Component-1 for Infrastructure Developme		USD 180 million	
a) Indicate the local	Component-2 for Investment Project Fin	J		
and foreign debt Loan	For capacity building of MCs & three	Govt.	USD 20 million	
	organization and program management.			
	20% share of Municipalities is equivalent to USD 36 million			
	Total funds available for Infrastructure USD 216 million			
	This project will be funded under this financing.			
b) Equity	A. Loan/grant to MC  The amount of loan converted to grant to 160,716,089 PKR. (160.71) million. The will be as given below:	he financ	ring of the project	
		PKR 160.	.71million	
	(80% of cost of PC-I)	NIE 40 1		
		YKR 40.1	7 million	
	cost of PC-I)  Total available funds  P	DVD 160	.71 million	
	Total available fullds P	7KK 100.	. / I IIIIIIOII	
	B. Project Cost PKR 200.89 million			
	*The loan is from World Bank to Government of Pakistan/Punjab which will trickle down to Wazirabad Unit as grant.			
c) Grants	No grant is being given by Government of Pu World Bank loan to Government of Pakistan grant to MC from Government of Punjab.	_		
d) Weighted cost of capital	Nil			

#### 11-Project benefits and analysis i. Financial: • The project comprises of improvement of roads, chowks and cross Income to the project roads in the city. with assumption • Wazirabad 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**. ii. Social benefits to the The completion of the project will result in: target group Up gradation of the infrastructure. Enhanced life of the roads and chowks. Reduction in travelling time of the commuters. Reduction of road accidents. Reduction in consumption of POL resulting in saving of the foreign exchange. Reduction in the operation and maintenance cost of the vehicles. Improvement in the environment of the city; Minimized public mental tension and frustration Improved local economy Improvement of city growth potential iii. Environmental Impact Construction/Rehabilitation of Roads and Chowks and their subsequent negative/positive 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 subprojects. To facilitate the selection of an optimal solution and for the inclusion of Safe Operating Procedures for Construction workers/labors; assessment indicators or an Environmental Screening Checklists have been developed which is attached as Annexure E (A) of this PC-1. The checklist focuses on Environmental Issues and social concerns and ensure that all

environmental and social dimensions are adequately considered. Based on the remarks of the screening checklist, Environment and Social

	Manag	ement Plans (ESMPs) are prepared	d and the necessary costs for		
	implementation of ESMPs have been provided in this PC-1.The				
	Environment, Health and Safety SOPs for labor/workers are provided as				
	Annexure E (B).				
	Moreover, the ESMP for the required road and chowk sub-projects will				
	be prepared and made part of the bidding documents.				
iv.Quantifiable project	The qu	antifiable project out puts have been	n given above in Sr. No-9 (V).		
outputs		ocial benefits to the citizen have bee	_		
v. Unit cost analysis	The unit cost analysis is produced below;				
		ct capital cost	PKR 200.89 million		
		lation of the city in year 2023	145,590 persons		
		capital cost per capita	PKR 1379		
		The state of the s			
	• Uni	t R&M cost: – The Repair & main	ntenance cost is already being		
	1 1	ne by Wazirabad Unit and there will			
		nprovement of the infrastructure R&			
		ears after completion of the project.			
vi. Employment	++	yment Analysis			
generation		Employment			
(direct and indirect)		unning and Design of projects			
		e planning and design of the proje	ct has been entrusted to local		
		isultants who have appointed staff a			
		ciplines along with their support s	=		
		point their staff for resident supervis			
	= =	tify the items of works to be execut			
	$\begin{vmatrix} \mathbf{b} \end{vmatrix}$	ecution of the Project			
		PMDFC			
		PMDFC has the project monitorin	g and supervisory role and the		
		company has enough experts	-		
		assignment. PMDFC has already d	-		
		for these projects:			
	•	Civil Engineers			
	•	Accounts, administration and audit	personnel		
	•	Urban planners	personner		
		GIS experts			
		<u> </u>	ore vahicla drivare offica hove		
	• 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 Wazirabad 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	The impact of delay in project implementation will;
project cost and	<ul> <li>Result in increased project cost due to escalation in cost of material</li> </ul>
viability	and labor.
110011105	<ul> <li>Delay the benefits to the target group</li> </ul>
	<ul> <li>Result in further deterioration of the infrastructure and the service</li> </ul>
	delivery level.
12-Implementation Scheo	<u> </u>
a) Indicate starting and completion date of the project	The project is anticipated to commence by January 2023 and to be completed by October 2023 with project implementation period of 10 months.
b) Item wise/year wise schedule in line chart	The Gant chart has been attached at <b>Annexure-D</b>
13- Management Structu	re and manpower requirements
i. Administrative	ii. Planning & design of the project
arrangements for the implementation 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 Wazirabad 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 Wazirabad 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	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

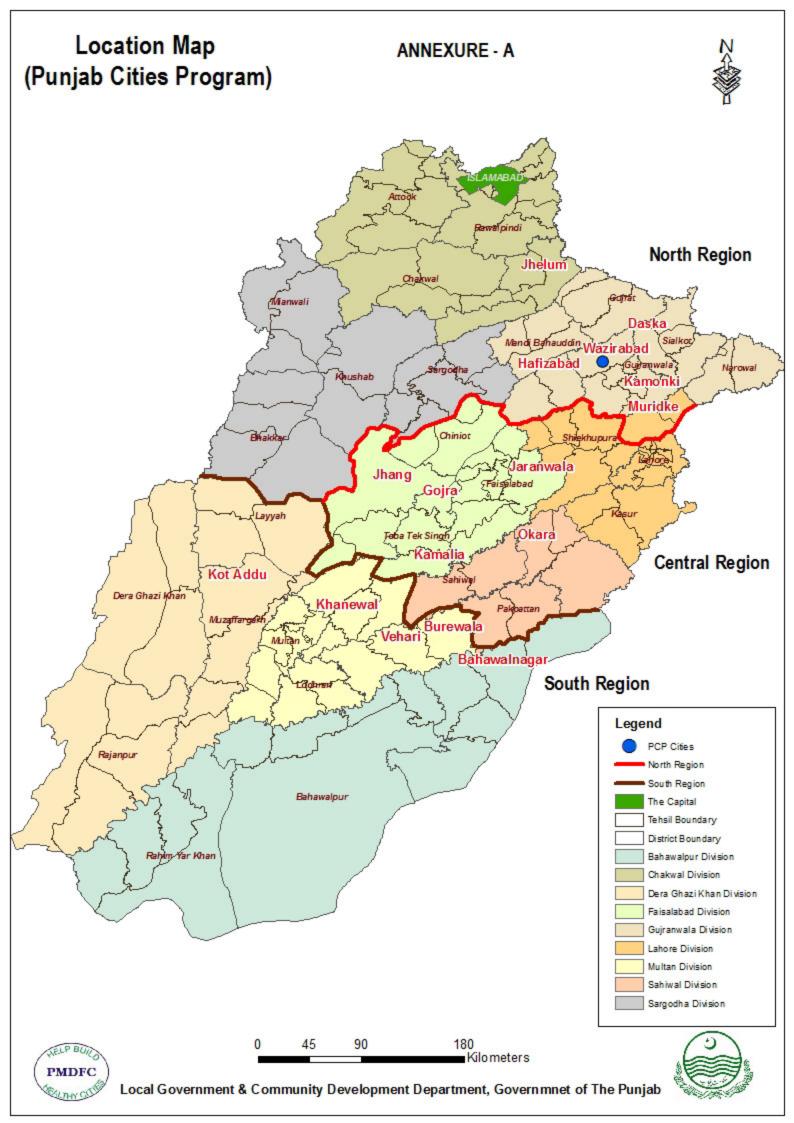
MC has its own regular staff which has been deployed for repair and maintenance of the municipal services infrastructure. However, it has been observed that the existing staff is not adequate to repair and maintain the services in a manner which can give good service delivery. Hence it is proposed to;

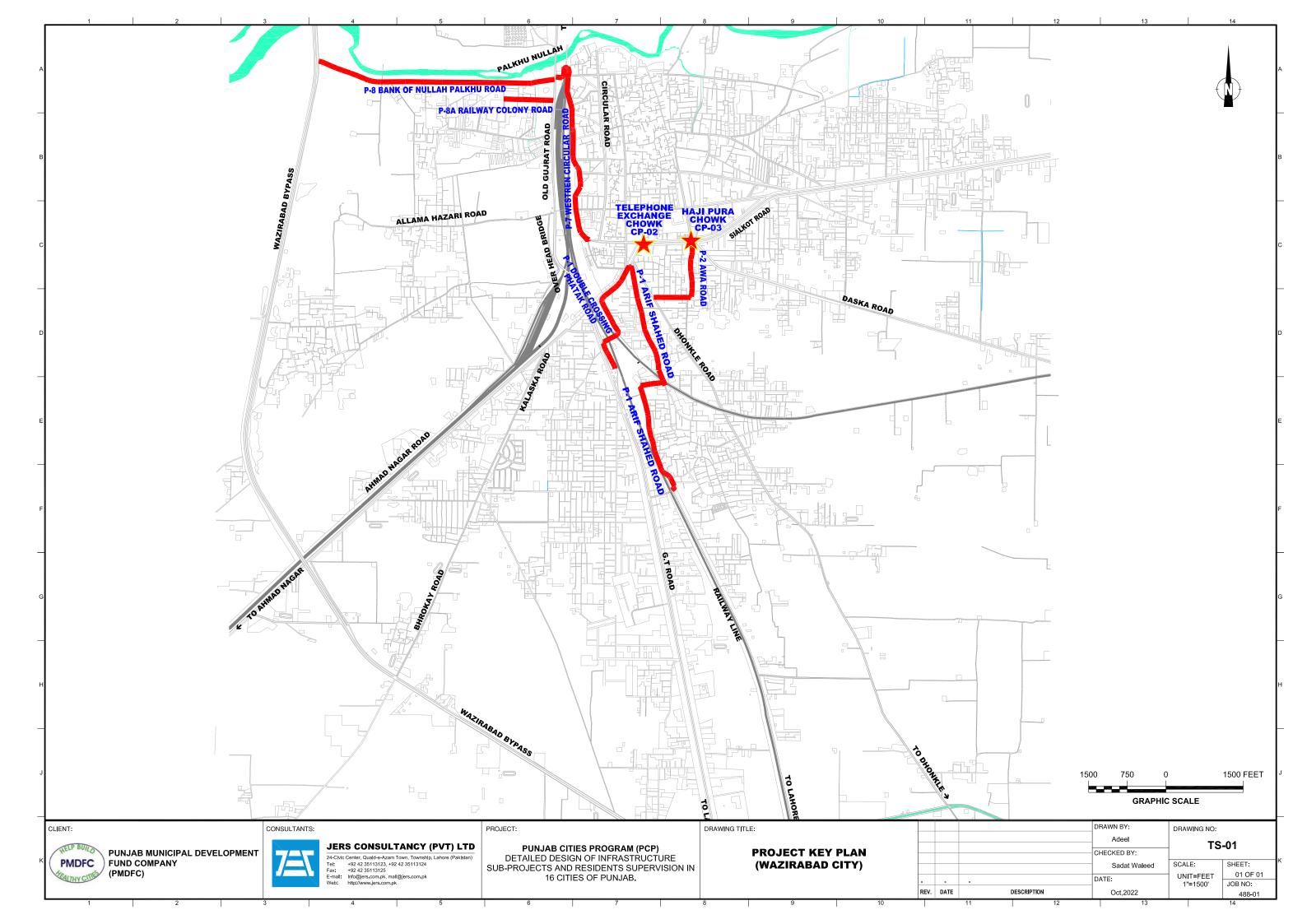
- Fill up the presently vacant slots
- Recruit additional staff as per need of the infrastructure after obtaining the sanctions from the competent authorities.

14-Additional projects	1)Shortage & frequent transfers of Provincially appointed staff				
/decisions required to	MC is facing shortage in provincially appointed and locally appointed				
optimize the investment	cadres. This will seriously affect the pace of progress of the program				
being undertaken	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	JERS Consultancy (Pvt) Ltd	Signatures	
by			
	Municipal Officer (Infrastructure)	Cianatumas	
	Municipal Officer (Infrastructure)	Signatures	
	Municipal Committee Wazirabad		
Checked	Chief Officer Municipal	Signatures	
	Committee Wazirabad	_	
by	Committee Wazaracaa		
	Administrator	Signatures	
	Municipal Committee		
	Wazirabad		
Vetted by	Senior Program Officer	Signatures	
	PMDFC		

# **Annexure-A Location Map**





### Annexure-B Cost Estimate

#### **ROAD WORKS**

#### MC WAZIRABAD

#### **DETAILED COST ESTIMATE**

#### **SUMMARY**

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	130,550,257
2	DRAINAGE SYSTEM	16,251,894
3	ELECTRICAL WORKS	39,304,130
4	ENVIRONMENTAL HEALTH SAFETY BUDGET	1,646,160
	Total Amount (Rs.)	187,752,441
	Contingencies @ 2%	3,755,049
	PRA Charges @ 5%	9,387,622
	Total Amount. Rs.	200,895,112

# MC WAZIRABAD DETAILED COST ESTIMATE SUMMARY

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	
1.1	P-01 DOUBLE CROSSING PHATAK ROAD	39,161,076
1.2	P-02 AWA ROAD	6,306,097
1.3	P-07 WESTREN CIRCULAR ROAD	37,421,866
1.4	P-08 BANK OF NULLAH PALKHU ROAD	30,967,086
1.5	P-08A RAILWAY COLONY ROAD	2,846,482
1.6	CHOWK	13,847,651
	1) Total Amount. Rs.	130,550,257
2	STORMWATER DRAINAGE SYSTEM	
2.1	P-01 DOUBLE CROSSING PHATAK ROAD	4,160,718
2.2	P-02 AWA ROAD	8,491,689
2.3	P-07 WESTREN CIRCULAR ROAD	1,604,641
2.4	P-08A RAILWAY COLONY ROAD	58,581
2.5	CHOWK	1,936,265
	2) Total Amount. Rs.	16,251,894
3	ELECTRICAL WORKS	
3.1	P-01 DOUBLE CROSSING PHATAK ROAD	20,129,871
3.2	P-02 AWA ROAD	7,472,920
3.3	P-07 WESTREN CIRCULAR ROAD	11,701,339
	3) Total Amount. Rs.	39,304,130
4	ENVIRONMENTAL HEALTH SAFETY BUDGET	1,646,160
	Total Amount (Rs.) "1+2+3+4"	187,752,441
	Say Millions	187.752

### **ROAD WORKS**

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

4/29	ROAD WORK				·
4/29					
4/29	Dismantling				
	Dismantling brick or flagged flooring without concrete foundation.	100Cft	128.25	866.20	111,090
	Scarifying				
18/11	Scarifying old road surface including removal of debris within 1 chain (30 m).	100Cft	95.15	424.60	40,401
	Excavation				
3/1	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	41.90	9,055.25	379,415
	Compaction of Earthwork				
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	26.28	1.783.25	46,864
	3/25	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  Compaction of Earthwork  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	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  Compaction of Earthwork  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	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  1000Cft  41.90  Compaction of Earthwork  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	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  41.90  9,055.25  Compaction of Earthwork  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

#### **DETAILED COST ESTIMATE**

#### P-01 DOUBLE CROSSING PHATAK ROAD

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#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		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	2,440.00	56.35	137,494
		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	200.00	518.90	103,780
		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 (For Shoulder)	Sft	134,810.00	192.80	25,991,368
12	18/5	Road Edging Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	14,520.00	58.65	851,598
		P.C.C (For Retaining Tuff Paver)				
13	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	23.96	38,271.80	916,992

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		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	304.00	693.90	210,946
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	60.00	950.25	57,015
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	110.00	1,260.85	138,694
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	60.00	1,114.60	66,876
		Crush				
18	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				

#### **DETAILED COST ESTIMATE**

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
19	MR	Deduction of used bricks from original quantity.	%oNos.	67.97	(4,800.00)	(326,268)
		Total Amount Rs.				39,161,076
		DRAINAGE SYSTEM				
		Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.75	11,209.45	8,354
		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	10.74	9,055.25	97,244
3	6/5	P.C.C  Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone				
		aggregate):				
		(i) Ratio 1: 4: 8	100Cft	3.45	29,079.80	100,325
		(f) Ratio 1: 2: 4	100Cft	19.10	38,271.80	730,991
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft.				
-	,,,,,	(3 m) Cement, sand mortar:- Ratio 1:3	100Cft	18.55	35,372.90	656,273
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	1.49	2,896.80	4,318
		Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-				
J	11/0/0	b) ½" (13 mm) thick	100Sft	12.10	3,468.30	41,965

#### **DETAILED COST ESTIMATE**

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
'		R.C.C Work				
7	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				
		nation 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. Type C (nominal mix 1:2:4)	D.G.	457.00	556.05	254.115
		1.2.4)	P Cft	457.00	556.05	254,115
		Steel				
8	6/12/b	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 40	100Kg	14.00	31,418.50	439,773
		V sub C4 sus				
9	6/52/b	Kerb Stone  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	162.50	518.90	84,321
		Gully Grating Chamber				
10	21/8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	40.00	17,162.50	686,500
11	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	25.00	2,944.60	73,615

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		uPVC Pipe				
12	19/47	Providing, fixing, testing and commissioning of $\mu$ -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	1,000.00	451.30	451,300
		RPC Manhole Cover				
13	N.S	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	Each	23.00	10,065.00	231,495
		Crush				
14	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.	Cft	2,409.88	119.77	288,628
		Manhole Cover				
15	MR	Old/existing Manhole cover and Frame				
10		complete set shift to MC store.	Set	23.00	500.00	11,500
		Total Amount (Rs)				4,160,718

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
<u> </u>		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	21.20	10,712.60	227,107
		RCC Foundation for Poles				
2	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		3) Type C (nominal mix 1: 2: 4)	Cft	1,512.00	456.85	690,757
		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	37.80	31,418.50	1,187,619

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Crush				
4	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.	Cft	1,330.56	119.77	159,359
5	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	7,875.00	188.45	1,484,044
6	24/12	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits /PVC pipe/G.I. wire/trenches, etc (rate for cable only):-				
		ii) 6 mm sq (7/0.044")	Rft	1,260.00	118.20	148,932
7	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") c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-	Rft	2,520.00	105.65	266,238
		vi) 10 mm (7/0.052")	Rft	7,875.00	524.50	4,130,438
		vii) 16 mm (7/0.064")	Rft	100.00	643.55	64,355

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	N.S	Supplying, installation testing and commissioning of Tubular shape electric street light pole, made of hot dipped 3 mm thick (7 SWG) galvanized steel ,tappered from127 mm at bottom to 60 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 350x350x20 mm base plate with the help of 4 no triangular stiffeners 100x20x100 mm of GI sheet,with built in junction box with shutter,i/c the cost of nuts & Jrag bolts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.				
		a) Single Arm				
		(i) 6 mtr height	Each	63.00	47,736.00	3,007,368
9	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.				
		(vi) 120 Watt with 14400 Lumens	Each	63.00	53,307.60	3,358,379
10	24/77	Supply and erection of electric energy meter, including meter testing fee, etc. b) three phase, 4 wires:			11 506 55	
		ii) 3x50 Amp, 400 volts	Each	1.00	14,693.25	14,693

#### DETAILED COST ESTIMATE

#### P-01 DOUBLE CROSSING PHATAK ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
11	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	329,622.55	329,623
12	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	66.00	9,635.35	635,933
		Sub Total Scheduled Items: (A)				15,704,845

# DETAILED COST ESTIMATE

### P-01 DOUBLE CROSSING PHATAK ROAD

2nd BI- Annual-2022					
(July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
on Schedule	Part-B				
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	325,026	325,026
N.S	Shifting of 25 Nos. Wapda Electric Poles	Job			3,750,000
N.S	Electric Connection Charges	Each	1.00	350,000	350,000
	Total Cost (Part B)			Rs.	4,425,026
	Grand Total (Part A + Part B)			Rs.	20,129,871
	Grand Total Amount Rs.				63,451,664
	N.S (a) N.S	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  N.S Shifting of 25 Nos. Wapda Electric Poles N.S Electric Connection Charges  Total Cost (Part B)  Grand Total (Part A + Part B)	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.  N.S Shifting of 25 Nos. Wapda Electric Poles Job N.S Electric Connection Charges Each  Total Cost (Part B)  Grand Total (Part A + Part B)	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  N.S Shifting of 25 Nos. Wapda Electric Poles Job N.S Electric Connection Charges Each 1.00  Total Cost (Part B)  Grand Total (Part A + Part B)	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. 1.00 325,026  N.S Shifting of 25 Nos. Wapda Electric Poles Job N.S Electric Connection Charges Each 1.00 350,000  Total Cost (Part B) Rs.  Grand Total (Part A + Part B) Rs.

### P-01 DOUBLE CROSSING PHATAK ROAD

### CALCULATION OF QUANTITES

							ī
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
1	Dismantling brick or flagged flooring without concrete						
	foundation.						
		1	2,850	4.50		12,825	Sft
					Total.	128.25	%Sft
	Scarifying						
2	Scarifying old road surface including removal of debris within 1 chain (30 m).						
	RD 0+000 to 0+290	1	290	13.50		3,915	Sft
	RD 0+290 to 0+610	1	320	17.50		5,600	Sft
					Total	9,515	Sft
					Total.	95.15	%Sft
3	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  For widening  RD 0+290 to 0+610  RD 0+900 to 1+650  RD 1+650 to 2+400  RD 2+400 to 2+550  RD 2+550 to 5+330  RD 5+330 to 7+550	1 2 1 1 1	320 750 750 150 2,780 2,220	2.50 5.00 5.00 7.00 11.00 4.00	0.75 0.75 0.75 1.00 0.75 1.00 Total	600 5,625 2,813 1,050 22,935 8,880 41,903	Cft Cft Cft Cft Cft Cft
					Total.	41.90	%Cft
	Compaction of Earthwork						
4	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 widening						
	RD 0+290 to 0+610	1	320	2.50	0.50	400	Cft
i	DD 0 000 1 650	2	750	5.00	0.50	3,750	Cft
	RD 0+900 to 1+650	2	/30	5.00	0.50	3,730	CIt

### P-01 DOUBLE CROSSING PHATAK ROAD

### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 2+400 to 2+550	1	150	7.00	0.50	525	Cft
	RD 2+550 to 5+330	1	2,780	11.00	0.50	15,290	Cft
	RD 5+330 to 7+550	1	2,220	4.00	0.50	4,440	Cft
					Total	26,280	Cft
					Total.	26.28	%oCft
	Sub Base Course						
5	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 Dina querry to site, actual compacted depth shall be considered for payment)						
	For widening						
	RD 0+290 to 0+610	1	320	2.50	0.33	264	Cft
	RD 0+900 to 1+650	2	750	5.00	0.33	2,475	Cft
	RD 1+650 to 2+400	1	750	5.00	0.33	1,238	Cft
	RD 2+400 to 2+550	1	150	7.00	0.33	347	Cft
	RD 2+550 to 5+330	1	2,780	11.00	0.33	10,091	Cft
	RD 5+330 to 7+550	1	2,220	4.00	0.33	2,930	Cft
					Total	17,345	Cft
					Total.	173.45	%Cft
						_	

### P-01 DOUBLE CROSSING PHATAK ROAD

### CALCULATION OF QUANTITES

Sr.							
No	Description	No.	Length	Width	Height	Qty.	Unit.
	Water Bound Macadam						
6	Providing and laying base course of crushed stone						
	(Water Bound Macadam) of approved quality and grade						
	including, placing, mixing, spreading and compaction of						
	base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO						
	dry density, including carriage of all material to site of						
	work complete in all respect as per specifications and as						
	directed by the engineer incharge. (Crushed stone						
	aggregate from Sargodha querry to site, actual						
	compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						
	RD 0+000 to 0+290	1	290	13.50	0.33	1,292	Cft
	RD 0+290 to 0+610	1	320	20.00	0.33	2,112	Cft
	RD 0+900 to 1+650	2	750	5.00	0.33	2,475	Cft
	RD 1+650 to 2+400	1	750	5.00	0.33	1,238	Cft
	RD 2+400 to 2+550	1	150	7.00	0.33	347	Cft
	RD 2+550 to 5+330	1	2,780	11.00	0.33	10,091	Cft
	RD 5+330 to 7+550	1	2,220	4.00	0.33	2,930	Cft
					Total	20,485	Cft
					Total.	204.85	%Cft
	Prime Coat						
7	Providing and laying bituminous priming coat, using 10						
	lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5						
	Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 0+290	1	290	13.50		3,915	Sft
	RD 0+290 to 0+610	1	320	17.50		5,600	Sft
					Total	9,515	Sft
					Total.	95.15	%Sft
	Carpeting						
	AWC						
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 0+290	1	290	13.50		3,915	Sft
	RD 0+290 to 0+610	1	320	17.50		5,600	Sft
					Total	9,515	Sft
					Total.	95.15	%Sft

### P-01 DOUBLE CROSSING PHATAK ROAD

### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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 0+290	4	290			1,160	Rft
	RD 0+290 to 0+610	4	320			1,280	Rft
	RD 01230 to 01010		320			1,200	Tet
					Total.	2,440	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						
	(i) i iigii	1	200			200	Rft
			200			200	Ter
					Total.	200	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 (For Shoulder)						
	RD 0+290 to 0+610	1	320	2.50		800	Sft
	RD 0+900 to 1+650	1	750	38.00		28,500	Sft
	RD 1+650 to 2+400	1	750	20.00		15,000	Sft
	RD 2+400 to 2+550	1	150	7.00		1,050	Sft
	RD 2+550 to 5+330	1	2,780	21.00		58,380	Sft
	RD 5+330 to 7+550	1	2,220	14.00		31,080	Sft
					Total.	134,810	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 0+290	2	290			580	Rft
	RD 0+290 to 0+610	2	320			640	Rft
	RD 0+900 to 1+650	2	750			1,500	Rft
	RD 1+650 to 2+400	2	750			1,500	Rft
	RD 2+400 to 2+550	2	150			300	Rft
	RD 2+550 to 5+330	2	2,780			5,560	Rft
	RD 5+330 to 7+550	2	2,220			4,440	Rft
					Total.	14,520	Rft

### P-01 DOUBLE CROSSING PHATAK ROAD

### CALCULATION OF QUANTITES

C							
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	P.C.C (For Retaining Tuff Paver)						
13	Cement concrete plain including placing, compacting,						
	finishing and curing complete (including screening and						
	washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 to 0+290	2	290	0.33	0.50	96	Cft
	RD 0+290 to 0+610	2	320	0.33	0.50	106	Cft
	RD 0+900 to 1+650	2	750	0.33	0.50	248	Cft
	RD 1+650 to 2+400	2	750	0.33	0.50	248	Cft
	RD 2+400 to 2+550	2	150	0.33	0.50	50	Cft
	RD 2+550 to 5+330	2	2,780	0.33	0.50	917	Cft
	RD 5+330 to 7+550	2	2,220	0.33	0.50	733	Cft
					Total.	23.96	%Cft
	G . F						
1.4	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	20.4				20.4	
	(ii) 43x2=86 Glass beads a side	304				304	Each
15	Durviding februaries and fiving sole mayered						
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	10	3.00	2.00		60	Sft
			2.00	2.00			
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	10	11			110	Rft

### P-01 DOUBLE CROSSING PHATAK ROAD

### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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					60	Sft
	DRAINAGE SYSTEM						
	Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	23	8.64	0.75	0.50	75	Cft
					Total	0.75	%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.						
	Proposed Drain 1.50ft wide drain	1	325	4.25	3.25	4,489	Cft
	Pipe Laying	40	25.00	2.50	2.50	6,250	Cft
	X				Total	10,739	Cft
					Total	10.74	%oCft
3	P.C.C  Cement concrete plain including placing, compacting, finishing and curing complete (including screening and						
	washing of stone aggregate):						
	(i) Ratio 1: 4: 8 Proposed Drain 1.50ft wide drain	1	325	4.25	0.25	345	Cft
			0.20	20	Total	3.45	%Cft
	(f) Ratio 1: 2: 4				Total	3,43	70CIt
	Proposed Drain 1.50ft wide drain						
	Proposed Drain base slab	1	325	4.25	0.50	691	Cft
	Benching	1	325	1.50	0.30	122	Cft
	Coping	1	343	1.50	0.23	122	Cit
	Proposed Drain 1.50ft wide drain	2	325	0.75	0.25	122	Cft
	Pipe Laying	40	10	1.50	1.50	900	Cft
	For manhole neck	23	8.64	0.75	0.50	75	Cft
	a or maintoic neek		0.04	0.73	Total	1,910	Cft
					Total	19.10	%Cft

### P-01 DOUBLE CROSSING PHATAK ROAD

# CALCULATION OF QUANTITES

Description						
	No.	Length	Width	Height	Qty.	Unit.
rick Work						
acca brick work other than building upto 10ft. (3 m) ement, sand mortar:- Ratio 1:3						
roposed Drain 1.50ft wide drain						
ep-1	1	325	1.125	2.50	914	Cft
ep-2	1	325	1.125	1.50	548	Cft
	1	325	0.750	1.00	244	Cft
or manhole neck	23	8.64	0.750	1.00	149	Cft
				Total	1,855	Cft
				Total	18.55	%Cft
ktra for pacca brick work in steining of wells or any						
her circular masonry.				Total	1.49	%Cft
ement plaster 1:3 upto 20' (6.00 m) height:-						
½" (13 mm) thick						
roposed Drain 1.50ft wide drain	1	325		2.50	813	Sft
or manhole neck	46	8.64		1.00	397	Sft
				Total	1,210	Sft
				<b></b>	10.10	
				Total	12.10	%Sft
_						
	0.7	325.00	3 00	0.67	457.00	Cft
	0.7	343.00	3.00	0.07	+37.00	CII
				Total	457.00	Cft
	ement, sand mortar:- Ratio 1:3 eposed Drain 1.50ft wide drain ep-1 ep-2 r manhole neck  tra for pacca brick work in steining of wells or any her circular masonry.  ement plaster 1:3 upto 20' (6.00 m) height:- 1/2" (13 mm) thick eposed Drain 1.50ft wide drain	ment, sand mortar:- Ratio 1:3  poposed Drain 1.50ft wide drain  pp-1  pp-2  1  r manhole neck  23  tra for pacca brick work in steining of wells or any mer circular masonry.  ment plaster 1:3 upto 20' (6.00 m) height:-  1/2" (13 mm) thick  poposed Drain 1.50ft wide drain  r manhole neck  46  C.C. Work  Dividing and laying reinforced cement concrete (i/c presessed concrete), using coarse sand and screened anded and washed aggregate, in required shape and sign, i/c forms, moulds, shuttering, lifting, mpacting, curing, rendering and finishing exposed rface, complete (but excluding the cost of steel inforcement, its fabrication and placing in position, mplete  (i) Reinforced cement concrete in roof slab, beams, lumns, lintels, girders and other structural members d in situ or pre-cast laid in position, or pre-stressed embers cast in situ, complete in all respect. Type C	ment, sand mortar:- Ratio 1:3  poposed Drain 1.50ft wide drain  pp-1  pp-2  1 325  r manhole neck  23 8.64  tra for pacca brick work in steining of wells or any her circular masonry.  ment plaster 1:3 upto 20' (6.00 m) height:-  ½" (13 mm) thick  poposed Drain 1.50ft wide drain  r manhole neck  46 8.64  C.C. Work  oviding and laying reinforced cement concrete (i/c presented and washed aggregate, in required shape and sign, i/c forms, moulds, shuttering, lifting, mpacting, curing, rendering and finishing exposed rface, complete (but excluding the cost of steel inforcement, its fabrication and placing in position, mplete  (i) Reinforced cement concrete in roof slab, beams, lumns, lintels, girders and other structural members d in situ or pre-cast laid in position, or pre-stressed embers cast in situ, complete in all respect. Type C ominal mix 1:2:4)	ment, sand mortar:- Ratio 1:3  poposed Drain 1.50ft wide drain  pp-1  pp-2  1 325 1.125  1 325 0.750  r manhole neck  23 8.64 0.750  tra for pacca brick work in steining of wells or any per circular masonry.  ment plaster 1:3 upto 20' (6.00 m) height:-  ½" (13 mm) thick  poposed Drain 1.50ft wide drain  r manhole neck  46 8.64   C.C.C. Work  Diding and laying reinforced cement concrete (i/c preessed concrete), using coarse sand and screened aded and washed aggregate, in required shape and sign, i/c forms, moulds, shuttering, lifting, mpacting, curing, rendering and finishing exposed frace, complete (but excluding the cost of steel inforcement, its fabrication and placing in position, mplete  (i) Reinforced cement concrete in roof slab, beams, lumns, lintels, girders and other structural members defined in situ or pre-cast laid in position, or pre-stressed embers cast in situ, complete in all respect. Type C brainal mix 1:2:4)	ment, sand mortar:- Ratio 1:3  poposed Drain 1.50ft wide drain  p-1	ment, sand mortar:- Ratio 1:3 posed Drain 1.50ft wide drain pp-1

### P-01 DOUBLE CROSSING PHATAK ROAD

# CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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 40						
			457	GC O	675	2.007	
	Concrete Qty		457	Cft @	6.75	3,085	lbs/cft
						1,400	kg
					Total	14.00	Kg
	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	0.5	325			163	Rft
					Total	163	Rft
	Gully Grating Chamber						
10	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	40				40.00	Each
11	Supplying and filling sand under floor; or plugging in wells.	40	25.00	2.50	1.00	25.00	%Cft
	uPVC Pipe						
12	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)	40	25.00			1,000	Rft

### P-01 DOUBLE CROSSING PHATAK ROAD

# CALCULATION OF QUANTITES

Sr.	] 						
No	Description	No.	Length	Width	Height	Qty.	Unit.
	RPC Manhole Cover						
13	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)	23				23	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	7,875	1.00	2.50	19,688	Cft
	Light Poles	63	2.00	2.00	6.00	1,512	Cft
					Total	21,200	Cft
					Total	21.20	%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	63	2.00	2.00	6.00	1,512	Cft
					Total	1,512	Cft
						,	-

### P-01 DOUBLE CROSSING PHATAK ROAD

# **CALCULATION OF QUANTITES**

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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/C	ft		3,780	Kg
					Total	37.80	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)	63	125.00			7,875	Rft
5	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-						
	ii) 6 mm sq (7/0.044")						
	For two nos. Earthing lead	63	20.00			1,260	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)	63	40.00			2,520	Rft
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-						
	vi) 10 mm (7/0.052")	63	125.00			7,875	Rft
	vii) 16 mm (7/0.064")	1	100.00			100	Rft
		1	100.00			100	14.

### P-01 DOUBLE CROSSING PHATAK ROAD

# CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
7	Supplying, installation testing and commissioning of Tubular shape electric street light pole, made of hot dipped 3 mm thick (7 SWG) galvanized steel ,tappered from127 mm at bottom to 60 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 350x350x20 mm base plate with the help of 4 no triangular stiffeners 100x20x100 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) 6 mtr height	63				63	Nos
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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	63				63	Nos
9	Supply and erection of electric energy meter, including meter testing fee, etc.						
	b) three phase, 4 wires:	1				1.00	NI
-	ii) 3x50 Amp, 400 volts	1				1.00	Nos

### P-01 DOUBLE CROSSING PHATAK ROAD

# CALCULATION OF QUANTITES

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.	66				66.00	No.
12	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
	LCP-3 Phase	1				1.00	Nos.
13	Shifting of 25 Nos. Wapda Electric Poles						
14	Electric Connection Charges	1				1.00	Each

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Excavation				
1	3/1	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	100000	1.21	0.055.25	11.062
		1) ordinary	1000Cft	1.31	9,055.25	11,862
		Compaction of Earthwork				
2	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	0.88	1,783.25	1,569
		Sub Base Course				
3	18/3/a/ (i) + 1/1	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Dina querry to site, actual compacted depth shall be considered for payment)	100Cft	5.78	14,353.62	82,964
		Water Bound Macadam				

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

4	Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
	18/4/a + 1/1	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)	100Cft	11.55	28,734.26	331,881
		Tuff Paver				
5	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	27,550.00	192.80	5,311,640
		e) es min unen	- Dit	27,550.00	1,2.00	2,211,010
		Road Edging				
6	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	3,500.00	58.65	205,275
		P.C.C (For Retaining Tuff Paver)				
7	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	5.78	38,271.80	221,211
8	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	950.25	17,105

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
9	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	1,260.85	41,608
10	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	1,114.60	20,063
		Crush				
11	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.	Cft	508.64	119.77	60,919
		Total Amount Rs.				6,306,097
		DRAINAGE SYSTEM Dismantling				
1	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.26	11,209.45	2,906
2	3/7/i	Excavation  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.				

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

~	2nd BI-				4	
Sr. No	Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		P.C.C				
3	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	10.86	38,271.80	415,632
		Brick Work				
4	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	37.27	35,372.90	1,318,292
5	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	0.52	2,896.80	1,502
	1.1 /0 /1-	Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100Sft	50.38	3,468.30	174,742
		R.C.C Work				
7	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				
		a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)	P Cft	3,447.00	556.05	1,916,704
		G. I				
8	6/12/b	Steel  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 40	100Kg	105.57	31,418.50	3,316,762

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

Sr.	2nd BI- Annual-2022 (July to Dec)	Description	Unit	Quantity	Unit Rate	Amount
No	Gujranwala	_			(Rs.)	( <b>Rs.</b> )
		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	1,225.00	518.90	635,653
		Gully Grating Chamber				
10	21/8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	5.00	17,162.50	85,813
11	7/30	Supplying and filling sand under floor; or plugging in wells.	100Cft	3.13	2,944.60	9,202
		uPVC Pipe				
12	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	100.00	451.30	45,130
		RPC Manhole Cover				
13	N.S	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete) (Certified under ISO 9001-2015)				
			Each	8.00	10,065.00	80,520

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
14	1/1	Crush  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.	Cft	3,989.04	119.77	477,761
		Manhole Cover				
15	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	8.00	500.00	4,000
		Total Amount (Rs)				8,491,689
		ELECTRICAL WORKS				
		Scheduled Items (A)				
1	3/21	Excavation  Excavation in foundation of building, bridges and				
1	3/21	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	6.06	10,712.60	64,918
		RCC Foundation for Poles				
2	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		3) Type C (nominal mix 1: 2: 4)	Cft	432.00	456.85	197,359

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)			
		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	10.80	31,418.50	339,320			
		Crush							
4	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.	Cft	380.16	119.77	45,531			
5	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	2,250.00	188.45	424,013			
6	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	360.00	118.20	42,552			
7	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	720.00	105.65	76,068			
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-							
		vi) 10 mm (7/0.052")	Rft	2,250.00	524.50	1,180,125			
		vii) 16 mm (7/0.064")	Rft	100.00	643.55	64,355			

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

	2nd BI-					
Sr. No	Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	N.S	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) 6 mtr height	Each	18.00	47,736.00	859,248
9	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				
		(vi) 120 Watt with 14400 Lumens	Each	18.00	53,307.60	959,537
10	24/77	Supply and erection of electric energy meter, including meter testing fee, etc.				
		b) three phase, 4 wires:				

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ii) 3x50 Amp, 400 volts	Each	1.00	14,693.25	14,693
111	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	329,622.55	329,623
12	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	21.00	9,635.35	202,342
		_	100	21.00	7,033.33	202,342
		Sub Total Scheduled Items: (A)				4,799,684

# **DETAILED COST ESTIMATE**

### P-02 AWA ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
N	on 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	223,236	223,236
14	N.S	Shifting of 14 Nos. Wapda Electric Poles	Job			2,100,000
15	N.S	Electric Connection Charges	Each	1.00	350,000	350,000
		Total Cost (Part B)			Rs.	2,673,236
		Grand Total (Part A + Part B)			Rs.	7,472,920
		Grand Total Amount Rs.				22,270,706

# P-02 AWA ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
1	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						
	For widening						
	RD 0+700 to 0+950	1	250	7.00	0.75 Total	1,313 1,313	Cft Cft
					Total.	1.31	%Cft
	Compaction of Earthwork						
2	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 widening						
	RD 0+700 to 0+950	1	250	7.00	0.50	875	Cft
	KD 0+700 to 0+930	1	230	7.00	Total	875	Cft
					Total.	0.88	%oCft
	Sub Base Course						
3	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 Dina querry to site, actual compacted depth shall be considered for payment)						
	For widening	1	250	7.00	0.22	570	Ge.
	RD 0+700 to 0+950	1	250	7.00	0.33 Total	578 578	Cft Cft
					Total.	5.78	%Cft 38 of 116

# P-02 AWA ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Water Bound Macadam						
4	Providing and laying base course of crushed stone						
	(Water Bound Macadam) of approved quality and grade						
	including, placing, mixing, spreading and compaction of						
	base course material to required depth, camber and						
	grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of						
	work complete in all respect as per specifications and as						
	directed by the engineer incharge. (Crushed stone						
	aggregate from Sargodha querry to site, actual						
	compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						
	RD 0+700 to 0+950	2	250	7.00	0.33	1,155	Cft
					Total	1,155	Cft
					Total.	11.55	%Cft
	Tuff Paver						
5	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 0+700	1	700	15.00		10,500	Sft
	RD 0+700 to 0+950	1	250	17.00		4,250	Sft
	RD 0+950 to 1+750	1	800	16.00		12,800	Sft
					<b></b>	<b>AT 77</b> 0	
					Total.	27,550	Sft
	Road Edging						
6	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 0+700	2	700			1,400	Rft
	RD 0+700 to 0+950	2	250			500	Rft
	RD 0+950 to 1+750	2	800			1,600	Rft
					Total.	3,500	Rft

### P-02 AWA ROAD

# CALCULATION OF QUANTITES

		1 ((0)					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	P.C.C (For Retaining Tuff Paver)						
7	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 to 0+700	2	700	0.33	0.50	231	Cft
	RD 0+700 to 0+950	2	250	0.33	0.50	83	Cft
	RD 0+950 to 1+750	2	800	0.33	0.50	264	Cft
					Total.	5.78	%Cft
8	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
9	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
10	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	8	8.64	0.75	0.50	26	Cft
					Total	0.26	%Cft

# P-02 AWA ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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	5	25.00	2.50	2.50	781	Cft
					Total	781	Cft
					Total	0.78	%oCft
	P.C.C						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4	_					
	Pipe Laying	5	13	1.50	1.50	141	Cft
	For manhole neck	8	8.64	0.75	0.50	26	Cft
	Existing Darin	2	2,450	0.75	0.25 Total	919 1,086	Cft Cft
	Brick Work				Total	10.86	%Cft
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	For manhole neck	8	8.64	0.75	1.00	52	Cft
	Existing Darin	2	2,450	0.75	1.00	3,675	Cft
					Total	3,727	Cft
					Total	37.27	%Cft
5	Extra for pacca brick work in steining of wells or any other circular masonry.				Total	0.52	%Cft
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck $(8 \times 2 = 16)$	16	8.64		1.00	138	Sft
		4	2,450		0.50	4,900	Sft
					Total	5,038	Sft
					Total	50.38	%Sft

# P-02 AWA ROAD

# CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	R.C.C Work			<u> </u>			
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. Type C						
	(nominal mix 1:2:4)						
		0.7	2,450	3.00	0.67	3,447.00	Cft
					Total	3,447.00	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 40						
	Concrete Qty		3,447	Cft @	6.75	23,267	lbs/cft
						10,557	kg
					Total	105.57	Kg
							8
	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	0.5	2,450			1,225	Rft
					Total	1,225	Rft
	Gully Grating Chamber						
10	Constructing standard gully grating chamber, 2'x2½'						
	(610x750 mm), with chinaware trap as per PHED						
	Drawing STD/PD No. 3 of 1977, complete in all					- 0.5	_
	respects.	5				5.00	Each
11	Supplying and filling sand under floor; or plugging in						
-	1 11 / 6 5 11001, 01 P10001115 III		I .		1		

# P-02 AWA ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	uPVC Pipe						
12	Providing, fixing, testing and commissioning of $\mu$ -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)	5	20.00			100	Rft
	RPC Manhole Cover						
13	Providing and fixing RPC Manhole Cover Manufactured with 100% Reinforced Plastic Composite Material, 650 mm dia with clear opening size 600 mm (24" dia) and RPC manhole frame having dia meter 790 mm (Complete)						
	(Certified under ISO 9001-2015)	8				8	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	2,250	1.00	2.50	5,625	Cft
	Light Poles	18	2.00	2.00	6.00	432	Cft
					Total	6,057	Cft
					Total	6.06	%oCft

# P-02 AWA ROAD CALCULATION OF QUANTITES

No.   Description   No.   Length   Width   Height   Qty.		CALCULATION C ROADS NE						
No.   Length   Width   Height   Qty.	G							
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  18 2.00 2.00 6.00 432  Total 432.00  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  1.080  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)  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/renches, etc (rate for cable only):-  ii) 6 mm sq (7/0.044")		Description	No.	Length	Width	Height	Qty.	Unit.
(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  18 2.00 2.00 6.00 432  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  1,080  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)  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")		RCC Foundation for Poles						
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  18 2.00 2.00 6.00 432  Steel Work  Total 432.00  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  1,080  Total 10.80  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)  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")	2	(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.):-						
Light Poles 18 2.00 2.00 6.00 432  Total 432.00  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 1,080  Total 10.80  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) 18 125.00 2,250  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")		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:-						
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  1,080  Total  10.80  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)  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")								
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  1,080  Total  10.80  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)  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")		Light Poles	18	2.00	2.00	6.00	432	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  1,080  Total  10.80  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)  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")						T-4-1	422.00	CIE
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  1,080  Total  10.80  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)  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")		Steel Work				Total	432.00	Cft
Total 10.80  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) 18 125.00 2,250  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")	3	concrete, including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel						
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)  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")		(b) Deformed bars (Grade-40)		2.50Kg/C	l Eft		1,080	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)  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")								
(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)  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")						Total	10.80	Kg
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")	4	(main and sub-main) purpose, including bends, specials, etc. in floor, wall or trenches:-						
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")		From LCP to Pole and pole to pole (Up + Down)	18	125.00			2,250	Rft
	5	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):-						
For two nos. Eartning lead   18   20.00     360		* ' '	10	20.00			260	Do.
		FOR TWO NOS. Eartning lead	18	20.00			360	Rft

# P-02 AWA ROAD CALCULATION OF QUANTITES

	Sr. Description						
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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)	18	40.00			720	Rft
	c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-	10	40.00			720	Kit
	vi) 10 mm (7/0.052")	18	125.00			2.250	Rft
	vii) 16 mm (7/0.064")	18	100.00			2,250	Rft
	VII) 10 IIIII (7/0.004-)	1	100.00			100	KII
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) 6 mtr height	18				18	Nos
8	Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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						
	(vi) 120 Watt with 14400 Lumens	18				18	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

# P-02 AWA ROAD CALCULATION OF QUANTITES

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.	21				21.00	No.
12	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
	LCP-3 Phase	1				1.00	Nos.
13	Shifting of 14 Nos. Wapda Electric Poles						
14	Electric Connection Charges	1				1.00	Each

### **DETAILED COST ESTIMATE**

### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Compaction of Existing Road Surface				
1	N.S	Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.	100Cft	22.00	5,808.29	127,782
		-	100011	22.00	2,000.23	127,702
		Excavation				
2	3/1	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	45.49	9,055.25	411,923
		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	30.33	1,783.25	54,086
		Sub Base Course				

### DETAILED COST ESTIMATE

### P-07 WESTREN CIRCULAR ROAD

Sr.	2nd BI- Annual-2022				Unit Rate	Amount
No	(July to Dec) Gujranwala	Description	Unit	Quantity	(Rs.)	(Rs.)
4	18/3/a/ (i) + 1/1	Providing and laying sub-base course of stone product of approved quality and grade including, placing, mixing, spreading and compaction of sub base material to required depth, camber and grade to achieve 98% maximum dry density determined according to AASHTO T-180 method-D, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Dina querry to site, actual compacted depth shall be considered for payment)				
			100Cft	200.15	14,353.62	2,872,877
5	18/4/a + 1/1	Water Bound Macadam  Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)	100Cft	264.50	28,734.26	7,600,211
6	10/41	Tuff Paver  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 (For Shoulder)	Sft	102,050.00	192.80	19,675,240
		R.C.C Work				

### DETAILED COST ESTIMATE

### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
7	6/6/a/i/3	Providing and laying reinforced cement concrete				
		(i/c pre-stressed concrete), using coarse sand				
		and screened graded and washed aggregate, in required shape and design, i/c forms, moulds,				
		shuttering, lifting, compacting, curing, rendering				
		and finishing exposed surface, complete (but				
		excluding the cost of steel reinforcement, its				
		fabrication and placing in position, complete				
		(a)(iii) Reinforced cement concrete in slab of				
		rafts / strip foundation, base slab of column and				
		retaining walls; etc and footing beams, other structural members other than those mentioned				
		in 6(a) (i)&(ii) above not requiring form work				
		(i.e. horizontal shuttering) complete in all				
		respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	P Cft	3,652.00	512.90	1,873,111
		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 40				
			100Kg	111.85	31,418.50	3,514,054
		Road Edging				
9	18/5	Providing and laying road edging of 3" (75 mm)				
		wide and 9" (225 mm) deep brick on end, complete in all respects.	D.C.	7 400 00	50 C5	424.010
		complete in an respects.	Rft	7,400.00	58.65	434,010
		P.C.C (For Retaining of Tuff Paver)				
10	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	12.21	38,271.80	467,299
					, -	, -

### DETAILED COST ESTIMATE

### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
11	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	60.00	950.25	57,015
12	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	110.00	1,260.85	138,694
13	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				
		a) High Intensity Prismatic (HIP) Tape	P. Sft	60.00	1,114.60	66,876
		, , , , ,			,	,
14	1/1	Crush 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.	Cft	1,074.48	119.77	128,689
		Total Amount Rs.				37,421,866
		DD A IN A CIE CIVICIDEM				
		DRAINAGE SYSTEM				
1	4/13	Dismantling Dismantling brick work in lime or cement mortar.	100Cft	7.50	4,330.90	32,482
2	4/19/c	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.06	11,209.45	726

#### **DETAILED COST ESTIMATE**

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Excavation				
3	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	5.47	9,055.25	49,523
		P.C.C				
4	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	9.90	38,271.80	378,891
		Brick Work				
5	7/7/i	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3	100Cft	0.13	35,372.90	4,585
6	7/10	Extra for pacca brick work in steining of wells or any other circular masonry.	100Cft	0.13	2,896.80	375
		Plaster				
7	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick	100Sft	0.35	3,468.30	1,199
		Gully Grating Chamber				
8	21/8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all respects.	Each	35.00	17,162.50	600,688
9	7/30	Supplying and filling sand under floor; or				
		plugging in wells.	100Cft	21.88	2,944.60	64,413

#### **DETAILED COST ESTIMATE**

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		uPVC Pipe				
10	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	875.00	451.30	394,888
		RPC Manhole Cover				
11	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	2.00	10,065.00	20,130
		Crush				
12	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.	Cft	871.20	119.77	104,342
		Manhole Cover				
13	MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	2.00	500.00	1,000
14	MR	Deduction of used bricks from original quantity.	%oNos.	10.13	(4,800.00)	(48,600)
		Total Amount (Rs)				1,604,641

#### **DETAILED COST ESTIMATE**

#### P-07 WESTREN CIRCULAR ROAD

	2 . I DI					
Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	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	10.43	10,712.60	111,732
		RCC Foundation for Poles				
2	6/6	Providing and laying reinforced cement concrete (including prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, including forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, etc.):-				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		3) Type C (nominal mix 1: 2: 4)	Cft	744.00	456.85	339,896
		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	18.60	31,418.50	584,384

#### **DETAILED COST ESTIMATE**

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Crush				
4	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 contractor.	C.f.	654.72	119.77	70 115
		owned by the contractor.	Cft	034.72	119.77	78,415
5	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	3,875.00	188.45	730,244
6	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	620.00	118.20	73,284
7	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	1,240.00	105.65	131,006
		c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:-				
		vi) 10 mm (7/0.052")	Rft	3,875.00	524.50	2,032,438
		vii) 16 mm (7/0.064")	Rft	100.00	643.55	64,355

#### **DETAILED COST ESTIMATE**

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
8	24/68	Supplying, installation testing and commissioning of Tubular shape electric street light pole, made of hot dipped 3 mm thick (7 SWG) galvanized steel ,tappered from127 mm at bottom to 60 mm at top,with 1500 mmx60 mm dia. arm for luminaire installation, duly G.I.welded with 350x350x20 mm base plate with the help of 4 no triangular stiffeners 100x20x100 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) 6 mtr height	Each	31.00	47,736.00	1,479,816
9	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				
		(vi) 120 Watt with 14400 Lumens	Each	31.00	53,307.60	1,652,536
10	24/77	Supply and erection of electric energy meter, including meter testing fee, etc. b) three phase, 4 wires:				

#### **DETAILED COST ESTIMATE**

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ii) 3x50 Amp, 400 volts	Each	1.00	14,693.25	14,693
11	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	329,622.55	329,623
12	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	34.00	9,635.35	327,602
			-		,	- , - , - , -
		Sub Total Scheduled Items: (A)				7,950,023
No	on Schedule	` '				7,200,0

#### DETAILED COST ESTIMATE

#### P-07 WESTREN CIRCULAR ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
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 21 Nos. Wapda Electric Poles	Job			3,150,000
15	N.S	Electric Connection Charges	Each	1.00	350,000	350,000
		Total Cost (Part B)			Rs.	3,751,316
		Grand Total (Part A + Part B)			Rs.	11,701,339
		Grand Total Amount Rs.				50,727,847

### P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

	ROADS INE							
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.	
1	Compaction of Existing Road Surface  Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.							
	RD 0+300 to 0+500	1	200	22.00	0.50	2,200	Cft	
					Total	2,200	Cft	
					Total.	22.00	%Cft	
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:- i) ordinary							
	For widening							
	RD 0+000 to 0+300	1	300	5.50	0.75	1,238	Cft	
	RD 0+500 to 1+800	1	1,300	15.00	0.75	14,625	Cft	
	RD 1+800 to 2+200	1	400	18.00	0.75	5,400	Cft	
	RD 2+200 to 3+900	1	1,700	19.00	0.75	24,225	Cft	
					Total	45,488	Cft	
					Total.	45.49	%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 widening							
	RD 0+000 to 0+300	1	300	5.50	0.50	825	Cft	
	RD 0+500 to 1+800	1	1,300	15.00	0.50	9,750	Cft	
	RD 1+800 to 2+200	1	400	18.00	0.50	3,600	Cft	
	RD 2+200 to 3+900	1	1,700	19.00	0.50	16,150	Cft	
					Total	30,325	Cft	

### P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	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 Dina querry to site, actual compacted depth shall be considered for payment)						
	For widening						
	RD 0+000 to 0+300	1	300	5.50	0.33	545	Cft
	RD 0+500 to 1+800	1	1,300	15.00	0.33	6,435	Cft
L	RD 1+800 to 2+200	1	400	18.00	0.33	2,376	Cft
	RD 2+200 to 3+900	1	1,700	19.00	0.33	10,659	Cft
<u> </u>					Total	20,015	Cft
					Total.	200.15	%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 Sargodha querry to site, actual compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						
	RD 0+000 to 0+300	1	300	5.50	0.33	545	Cft
	RD 0+500 to 1+800	2	1,300	15.00	0.33	12,870	Cft
	RD 1+800 to 2+200	1	400	18.00	0.33	2,376	Cft
	RD 2+200 to 3+900	1	1,700	19.00	0.33	10,659	Cft
					Total	26,450	Cft
					Total.	264.50	%Cft

### P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

Sr.						_	
No	Description	No.	Length	Width	Height	Qty.	Unit.
	Tuff Paver						
6	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 (For Shoulder)						
	RD 0+000 to 0+300	1	300	27.50		8,250	Sft
	RD 0+500 to 1+800	1	1,300	25.00		32,500	Sft
	RD 1+800 to 2+200	1	400	30.00		12,000	Sft
	RD 2+200 to 3+900	1	1,700	29.00		49,300	Sft
					Total.	102,050	Sft
	R.C.C Work						
7	Providing and laying reinforced cement concrete (i/c pre- stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:- (2) Type B (nominal mix 1: 1½: 3)						
	RD 0+300 to 0+500	1	200.00	22.00	0.83	3,652.00	Cft
					Total.	3,652.00	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 40						
	Concrete Qty		3,652	Cft @	6.75	24,651	lbs/cft
						11,185	kg
					Total	111.85	%Kg
<u> </u>	Road Edging						
	Avour Duging						60 of 116

### P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
7	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 0+300	2	300			600	Rft
	RD 0+500 to 1+800	2	1,300			2,600	Rft
	RD 1+800 to 2+200	2	400			800	Rft
	RD 2+200 to 3+900	2	1,700			3,400	Rft
					Total.	7,400	Rft
	P.C.C (For Retaining of Tuff Paver)						
8	Cement concrete plain including placing, compacting,						
	finishing and curing complete (including screening and						
	washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 to 0+300	2	300	0.33	0.50	99	Cft
	RD 0+500 to 1+800	2	1,300	0.33	0.50	429	Cft
	RD 1+800 to 2+200	2	400	0.33	0.50	132	Cft
	RD 2+200 to 3+900	2	1,700	0.33	0.50	561	Cft
					Total.	12.21	%Cft
9	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	10	3.00	2.00		60	Sft
10	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	10	11			110	Rft
11	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					60	Sft
	-						

### P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
110	DRAINAGE SYSTEM						
	Dismantling						
1	Dismantling brick work in lime or cement mortar.						
	5	2	500.00	0.75	1.00	750	Cft
					Total	7.50	%Cft
2	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	2	8.64	0.75	0.50	6	Cft
					Total	0.06	%Cft
	Excavation						
3	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	35	25.00	2.50	2.50	5,469	Cft
					Total	5,469	Cft
					Total	5 47	%oCft
	P.C.C				Total	5,47	700CIt
4	Cement concrete plain including placing, compacting,						
7	finishing and curing complete (including screening and						
	washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	Pipe Laying	35	13	1.50	1.50	5,469 5.47 5.47 984 6 990	Cft
	For manhole neck	2	8.64	0.75	0.50		Cft
	1 of mannote neck		0.04	0.73	Total		Cft
					Total	770	Cit
					Total	9.90	%Cft
	Brick Work						
5	Pacca brick work other than building upto 10ft. (3 m)						
	Cement, sand mortar:- Ratio 1:3						
	For manhole neck	2	8.64	0.75	1.00	13	Cft
					Total	13	Cft
					Total	0.13	%Cft

### P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
6	Extra for pacca brick work in steining of wells or any other circular masonry.				Total	0.13	%Cft
7	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck	4	8.64		1.00	35	Sft
					Total	35	Sft
					Total	0.35	%Sft
	Gully Grating Chamber						
8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all						
	respects.	35				35.00	Each
9	Supplying and filling sand under floor; or plugging in						
	wells.	35	25.00	2.50	1.00	21.88	%Cft
	uPVC Pipe						
10	Providing, fixing, testing and commissioning of $\mu$ -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)	35	25.00			875	Rft
	RPC Manhole Cover						
11	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)	2				2	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						

### P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

		1 00					
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	ii) in ordinary soil.						
	For pipe 50mm dia from TR to LCP and LCP to poles	1	3,875	1.00	2.50	9,688	Cft
	Light Poles	31	2.00	2.00	6.00	744	Cft
					Total	10,432	Cft
					TD 4 1	10.42	0/ 08
	RCC Foundation for Poles				Total	10.43	%oCft
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	31	2.00	2.00	6.00	744	Cft
					Total	744.00	Cft
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/C	ft		1,860	Kg
					Total	18.60	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)	31	125.00			3,875	Rft
5	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 660/1100 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):-						

#### P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

Sr.   Description   No.   Length   Width   Height   Qty.							CALCULATION ( ROADS NE	
For two nos. Earthing lead  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)  o) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:  vi) 10 mm (7/0.052")  31 125.00  3,875  vii) 16 mm (7/0.064")  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) 6 mtr height  8 Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorm 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	Unit.	Qty.	Height	Width	Length	No.	Description	
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)  c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:  vi) 10 mm (7/0.052")  vii) 16 mm (7/0.064")  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.velded 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 botts, duly fixed in prelaid concrete foundation, foundation will be paid additionally as approved and directed by the Engineer Incharge.  a) Single Arm  (i) 6 mtr height  8 Supplying, installation and commissioning of LED Cobra-head Luminaires of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thorn with corrosion resistant die casted aluminum housing, silicon gas kii, 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							ii) 6 mm sq (7/0.044")	
service connection, in prelatid 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)  c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:  vi) 10 mm (7/0.052")  31 125.00  3,875  vii) 16 mm (7/0.064")  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) 6 mtr height  8 Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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	Rft	620			20.00	31	For two nos. Earthing lead	
iii) 7/0.74 mm (7/0.029")  From Terminal Box to light fixture on pole (P+N+E) 31 40.00 1,240 c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:  vi) 10 mm (7/0.052") 31 125.00 3,875 vii) 16 mm (7/0.064") 1 100.00 100  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 stappered 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) 6 mtr height 31 31  8 Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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							service connection, in prelaid pipe/G.I. wire / trenches, etc. (rate for cable only):-	6
From Terminal Box to light fixture on pole (P+N+E) c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable;- vi) 10 mm (7/0.052") 31 125.00 3,875 vii) 16 mm (7/0.064") 1 100.00 100  Tougonal 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) 6 mtr height 31  Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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							cable:-	
c) PVC insulated, PVC sheathed 4 core, 660/1100 volt non armoured cable:  vi) 10 mm (7/0.052")  31 125.00  3,875  vii) 16 mm (7/0.064")  1 100.00  100  3 100.00  3,875  3 1 125.00  3,875  1 100.00  3,875  1 100.00  3,875  1 100.00  3,875  1 100.00  3,875  1 100.00  3,875  1 100.00  3,875  1 100.00  3,875  1 100.00  3,875  1 100.00  100  100  100  100  100  100								
660/1100 volt non armoured cable:  vi) 10 mm (7/0.052")  31 125.00  3,875  vii) 16 mm (7/0.064")  1 100.00  100  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) 6 mtr height  31  31  31  8 Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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	Rft	1,240			40.00	31	<u> </u>	
vi) 10 mm (7/0.052")  vii) 16 mm (7/0.064")  1 100.00  100  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) 6 mtr height  31  Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming to IP 65, Philips/ Osram /Thom 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	] 							
vii) 16 mm (7/0.064")  1 100.00  100  100  100  100  100  100	Rft	3 975			125.00	31		
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.  8 Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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	Rft	,						
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) 6 mtr height  31  Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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		100			100.00	1	(1) 10 mm (7/01001)	
(i) 6 mtr height  8 Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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							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.	,
8 Supplying, installation and commissioning of LED Cobra-head Luminaries of specified wattage and lumens conforming 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	Non	21				21		
Cobra-head Luminaries of specified wattage and lumens conforming 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	Nos	31				31	(i) o mu neight	
							Cobra-head Luminaries of specified wattage and lumens conforming 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.	8
(vi) 120 Watt with 14400 Lumens 31								
(17) 120 (18) (18) 20 (18) (18)	Nos	31				31	(vi) 120 Watt with 14400 Lumens	

### P-07 WESTREN CIRCULAR ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
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
	11) 5x50 Amp, 400 voits	1				1.00	Nos
10	Supply, insatllation, commissioning and testing of oil cooled type, Step down Power Transformer of specified rating,11/0.415 kV, i/c the cost of lifting hooks, thermometers, LT & HT bushing 5-steps, tap changer, imported double float buchholz relay, 2 earthing terminals, roller wheels, connecting terminals for cables M.S box on transformer in order to cover complete L.T side, all necessary materials required for connections on H.T & L.T side, rated voltage 11000/415/240 V impedance 6.25% or as specified by WAPDA/IEC system earth: Delta / Star, neutral solidly earthed, i/c Wapda testing charges,complete in all respects made of PEL, Siemens, as approved and directed by the Engineer Incharge						
	(iii) 25 KVA	1				1.00	Nos.
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.	34				34.00	No.
	Fabrication, Supply, testing and commissioning of following Light control panels (LCP), floor standing weather proof, IP 65 Rated of appropriate size, made of MS Sheet 16 SWG with hinged door, handle, catcher, 2 coats of antirust and powder coated paint of approved colour, AC3 megnatic contactor, photocell for automatic operation of lights, CBs, Hand/Off/Auto switch, push button and all necessary accessories complete in all respects. LCP shall be manufactured as per specifications, single line diagram complete in all respect up to the satisfaction of Engineer incharge.						
	LCP-3 Phase	1				1.00	Nos.
13	Shifting of 21 Nos. Wapda Electric Poles						
14	Electric Connection Charges	1				1.00	Each

#### **DETAILED COST ESTIMATE**

#### P-08 BANK OF NULLAH PALKHU ROAD

Sr. No	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Scarifying				
1	18/11	Scarifying old road surface including removal of debris within 1 chain (30 m).	100Cft	465.60	424.60	197,694
2	3/47	Jungle clearance and removing within 100 ft. (30 m).				
		b) thick	1000 Sft.	205.80	509.50	104,855
		Excavation				
3	3/1	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	8.95	9,055.25	81,044
		Borrow Earth				
4	3/5/i + 3/17	Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.	1000Cft	450.00	17,256.33	7,765,346
		Compaction of Earthwork				
5	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	5.97	1,783.25	10,646

#### **DETAILED COST ESTIMATE**

#### P-08 BANK OF NULLAH PALKHU ROAD

18/3/a/ (i) + 1/1 18/4/a + 1/1	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 Dina querry to site, actual compacted depth shall be considered for payment)  Water Bound Macadam  Providing and laying base course of crushed stone	100Cft	39.39	14,353.62	565,389
(i) + 1/1 18/4/a +	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 Dina querry to site, actual compacted depth shall be considered for payment)  Water Bound Macadam  Providing and laying base course of crushed stone		39.39	14,353.62	565,389
+	Water Bound Macadam  /4/a Providing and laying base course of crushed stone	100Cft	39.39	14,353.62	565,389
+	/4/a Providing and laying base course of crushed stone				
+	/4/a Providing and laying base course of crushed stone				
	, 11	100Cft	55.89	28,734.26	1,605,958
	Prime Coat				
18/6		100Sft	598.08	2,309.00	1,380,967
	G				
18/10/a	Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick)	Per inch thickness per 100Sft.	598.08	16,676.12	9,973,654
	18/	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.  Carpeting  AWC  18/10/a  Providing and laying plant premixed bituminous carpet, including compaction and finishing to	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.  Carpeting  AWC  18/10/a  Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick)	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.  Carpeting  AWC  18/10/a  Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick)  Providing and laying plant premixed bituminous thickness per 100Sft.	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.  Carpeting  AWC  18/10/a Providing and laying plant premixed bituminous carpet, including compaction and finishing to required camber, grade and density. (2 inch thick)  Providing and laying plant premixed bituminous per inch thickness per 100Sft.

#### **DETAILED COST ESTIMATE**

#### P-08 BANK OF NULLAH PALKHU ROAD

	2nd BI-Annual-					
Sr. No	2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Paint For Traffic Lanes				
10	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	11,640.00	56.35	655,914
11	18/5	Road Edging  Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.	Rft	1,312.00	58.65	76,949
12	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	42.00	950.25	39,911
13	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	77.00	1,260.85	97,085
14	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	42.00	1,114.60	46,813
15	3/32	Turfing slopes of banks or lawns with grass sods including ploughing, laying, setting and watering (Turf got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).	100Sft	914.58	1,698.40	1,553,323
		, ,		711100	_,0,0,10	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

#### **DETAILED COST ESTIMATE**

#### P-08 BANK OF NULLAH PALKHU ROAD

Sr. No	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
16	16/32	Grouting stone pitching or apron, etc. in:-				
		b) cement, sand mortar 1:8	100Sft	1,060.50	6,422.95	6,811,538
		Total Amount Rs.				30,967,086

#### P-08 BANK OF NULLAH PALKHU ROAD

#### **CALCULATION OF QUANTITES**

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Scarifying						
1	Scarifying old road surface including removal of debris within 1 chain (30 m).						
	RD 0+000 to 4+656	1	4,656	10.00		46,560	Sft
					Total	46,560	Sft
					Total.	465.60	%Sft
2	Jungle clearance and removing within 100 ft. (30 m).						
	b) thick	2	4,656	2.21		20,580	Sft
					Total.	205.80	%Sft
	Excavation						
3	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						
	For widening						
	RD 0+000 to 4+000	2	4,000	1.00	0.75	6,000	Cft
	RD 4+000 to 4+656	1	656	6.00	0.75	2,952	Cft
					Total	8,952	Cft
					Total.	8.95	%Cft
4	Borrow Earth  Earthwork in ordinary soil for embankment including ploughing and mixing with blade grade or disc harrow or other suitable equipment and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:- 90% to 95% maximum modified dry density as determined according to AASHTO T-180 method-D including Transportation of earth.						
		1	2,000	15.00	15.00	450,000	Cft
					Total.	450.00	%Cft
				<u> </u>			- 3-4

#### P-08 BANK OF NULLAH PALKHU ROAD

#### CALCULATION OF QUANTITES

C.,							
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Compaction of Earthwork						
5	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 widening		4.000	1.00	0.70	4.000	
	RD 0+000 to 4+000	2	4,000	1.00	0.50	4,000	Cft
	RD 4+000 to 4+656	1	656	6.00	0.50 Total	1,968	Cft Cft
					Total	5,968	Cit
					Total.	5.97	%oCft
	Sub Base Course						
6	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 Dina querry to site, actual compacted depth shall be considered for payment)						
	For widening						
	RD 0+000 to 4+000	2	4,000	1.00	0.33	2,640	Cft
-	RD 4+000 to 4+656	1	656	6.00	0.33	1,299	Cft
					Total	3,939	Cft
					Total.	39.39	%Cft
	Water Bound Macadam						
7	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from Sargodha querry to site, actual compacted depth shall be considered for payment)						
	Crushed stone aggregate from approved quarry						
	For Road						
	RD 0+000 to 4+000	2	4,000	1.00	0.33	2,640	Cft
<u> </u>		<u> </u>	,,,,,			,	72 of 116

#### P-08 BANK OF NULLAH PALKHU ROAD

#### **CALCULATION OF QUANTITES**

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 0+000 to 4+656	1	656	6.00	0.33	1,299	Cft
	Leveling layer	1	500	10.00	0.33	1,650	Cft
					Total	5,589	Cft
					Total.	55.89	%Cft
	Prime Cont						
8	Prime Coat  Providing and laying bituminous priming coat, using 10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5 Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 4+656	1	4,656	12.00		55,872	Sft
	RD 4+000 to 4+656	1	656	6.00		3,936	Sft
					Total	59,808	Sft
					Total.	598.08	%Sft
	Carpeting						
	AWC						
9	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 4+656	1	4,656	12.00		55,872	Sft
	RD 4+000 to 4+656	1	656	6.00		3,936	Sft
					Total	59,808	Sft
					Total.	598.08	%Sft
	D 4 15 (D 60) 1						
10	Paint For Traffic Lanes						
10	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	2.5	4,656			11,640	Rft
11	Road Edging  Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects.						
	RD 4+000 to 4+656	2	656			1,312	Rft
					Total.	1,312	Rft
12	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.						

#### P-08 BANK OF NULLAH PALKHU ROAD

#### **CALCULATION OF QUANTITES**

Sr.	Description	No.	Length	Width	Height	Qty.	Unit.
No	(a) G.I Sheet 14 SWG		J				
	CIRCULAR/TRIANGULAR						
	3 ft size	7	3.00	2.00		42	CP4
			3.00	2.00		42	Sft
13	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						
	-	7	1.1				
	(b) 3 inch diameter	7	11			77	Rft
14	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					42	Sft
15	Turfing slopes of banks or lawns with grass sods						
	including ploughing, laying, setting and watering (Turf						
	got from within a distance of 5 miles (8 Km.) and maintenance for 15 days).						
	RD 0+000 to 2+156		2.156	21 21		01.450	a c
	KD 0+000 to 2+156	2	2,156	21.21		91,458	Sft
					Total	914.58	% Sft
					10111	711100	70 510
16	Grouting stone pitching or apron, etc. in:-						
	b) cement, sand mortar 1:8						
	RD 2+156 to 4+656	2	2,500	21.21		106,050	Sft
					Total	1,060.50	% Sft

#### **DETAILED COST ESTIMATE**

#### P-08A RAILWAY COLONY ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Prime Coat				
1	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.		139.49	2,309.00	322,082
		Carpeting				
		AWC				
2	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.	139.49	16,676.12	2,326,152
2	12/26	Paint For Traffic Lanes				
3	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	1,924.00	56.35	108,417
		Painting new surface:-				
4	13/5/f	f) Preparing surface and painting of small detached articles, not exceeding one sq. ft. (Sq.m) of painted surface:-				
		i) priming coat.	100 Nos.	9.62	2,412.20	23,205
		ii) each subsequent coat of paint.	100 Nos.	9.62	1,466.50	14,108
5	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	12.00	950.25	11,403

#### **DETAILED COST ESTIMATE**

#### P-08A RAILWAY COLONY ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
6	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	22.00	1,260.85	27,739
7	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	12.00	1,114.60	13,375
		Total Amount Rs.				2,846,482
		DRAINAGE SYSTEM				
1	4/19/c	Dismantling	10006	0.02	11 200 45	262
1	4/19/0	c) Dismantling cement concrete 1:2:4 plain.	100Cft	0.03	11,209.45	363
		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	0.16	9,055.25	1,413
		n a a				
3	6/5	P.C.C  Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	0.31	38,271.80	11,864
		Brick Work				
	I	1		1		

#### **DETAILED COST ESTIMATE**

#### P-08A RAILWAY COLONY ROAD

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
4	7/7/i	Pacca brick work other than building upto 10ft. (3				
		m) Cement, sand mortar:- Ratio 1:3	100Cft	0.06	35,372.90	2,292
5	7/10	Extra for pacca brick work in steining of wells or				
		any other circular masonry.	100Cft	0.06	2,896.80	188
	11/0/1	Plaster				
6	11/8/b	Cement plaster 1:3 upto 20' (6.00 m) height:-		0.17	2.450.20	
		b) ½" (13 mm) thick	100Sft	0.17	3,468.30	599
		Cully Custing Chamban				
7	21/8	Gully Grating Chamber				
/	21/8	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per				
		PHED Drawing STD/PD No. 3 of 1977, complete				
		in all respects.	Each	1.00	17,162.50	17,163
		in an respects.	Eacii	1.00	17,102.30	17,103
8	7/30	Supplying and filling sand under floor; or				
	7750	plugging in wells.	100Cft	0.63	2,944.60	1,840
		Program in and	100011	0.05	2,511.00	1,010
		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.				
		<b>Type (SDR 41/SN-4)</b>				
		(vii) 8"(200 mm)	Rft	20.00	451.30	9,026
10		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)				
		(Certified under 150 7001-2013)	г 1	1.00	10.065.00	10.065
			Each	1.00	10,065.00	10,065

#### **DETAILED COST ESTIMATE**

#### P-08A RAILWAY COLONY ROAD

2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
	Crush				
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.	Cft	27.28	119.77	3,267
	Manhole Cover				
MR	Old/existing Manhole cover and Frame complete set shift to MC store.	Set	1.00	500.00	500
	Total Amount (Rs)				58,581
	Grand Total Amount Rs.				2,905,062
	Annual-2022 (July to Dec) Gujranwala	Annual-2022 (July to Dec) Gujranwala  Crush  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.  Manhole Cover  MR  Old/existing Manhole cover and Frame complete set shift to MC store.  Total Amount (Rs)	Annual-2022 (July to Dec) Gujranwala  Crush  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 contractor.  Manhole Cover  MR  Old/existing Manhole cover and Frame complete set shift to MC store.  Set  Total Amount (Rs)	Annual-2022 (July to Dec) Gujranwala  Crush  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.  Cft 27.28  Manhole Cover  MR Old/existing Manhole cover and Frame complete set shift to MC store.  Set 1.00  Total Amount (Rs)	Annual-2022 (July to Dec) Gujranwala  Crush  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.  Manhole Cover  MR Old/existing Manhole cover and Frame complete set shift to MC store.  Total Amount (Rs)  Description  Unit Quantity  Crush  Cft 27.28  119.77

### P-08A RAILWAY COLONY ROAD CALCULATION OF QUANTITES

C.			1			1	
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
110							
	Prime Coat						
1	Providing and laying bituminous priming coat, using						
	10 lbs. kerosene oil and 10 lbs. binder per 100 Sft. or						
	0.5 Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 to 0+962	1	962	14.50		13,949	Sft
	RD 0+000 to 0+902	1	902	14.50	Total		Sft
					Total	13,949	Sit
					<b>T</b>	120.10	2100
					Total.	139.49	%Sft
	Carpeting						
	AWC						
2	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 0+962	1	962	14.50		13,949	Sft
					Total	13,949	Sft
					Total.	139.49	%Sft
	D. L. V. C. CO. V.						
	Paint For Traffic Lanes						
3	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.						
		2	062			1 024	D&
	ii) 6" wide	2	962			1,924	Rft
4	f) Preparing surface and painting of small detached						
4	articles, not exceeding one sq. ft. (Sq.m) of painted						
	surface:-						
	i) priming coat.	1	962			9.62	100Nos.
	ii) each subsequent coat of paint.						
	ii) each subsequent coat of paint.	1	962			9.62	100Nos.
5	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	2	3.00	2.00		12	Sft
			5.00	2.00		14	DIL

### P-08A RAILWAY COLONY ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
6	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 embedded in PCC 1:2:4 etc, complete in all respect						
	(b) 3 inch diameter	2	11			22	Rft
7	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					12	Sft
	DD AIN A CE CYCEEM						
	DRAINAGE SYSTEM Dismantling						
1	c) Dismantling cement concrete 1:2:4 plain.						
	Manhole Neck	1	8.64	0.75	0.50	3	Cft
							- '
					Total	0.03	%Cft
	77						
2	Excavation  Earthwork excavation in open cutting upto 5'-0" (1.5)						
2	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	1	25.00	2.50	2.50	156	Cft
					Total	156	Cft
					Total	0.16	%oCft
	P.C.C						
3	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	Pipe Laying	1	13	1.50	1.50	28	Cft
	For manhole neck	1	8.64	0.75	0.50	3	Cft
					Total	31	Cft
					Total	0.31	%Cft

### P-08A RAILWAY COLONY ROAD CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Brick Work						
4	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3						
	For manhole neck	1	8.64	0.75	1.00	6.48	Cft
					Total	6.48	Cft
					Total	0.06	%Cft
5	Extra for pacca brick work in steining of wells or any						
	other circular masonry.				Total	0.06	%Cft
6	Cement plaster 1:3 upto 20' (6.00 m) height:-						
	b) ½" (13 mm) thick						
	For manhole neck $(38 \times 2 = 76)$	2	8.64		1.00	17	Sft
					Total	17	Sft
					Total	0.17	%Sft
	Gully Grating Chamber						
7	Constructing standard gully grating chamber, 2'x2½' (610x750 mm), with chinaware trap as per PHED Drawing STD/PD No. 3 of 1977, complete in all						
	respects.	1				1.00	Each
8	Supplying and filling sand under floor; or plugging in wells.	1	25.00	2.50	1.00	0.63	%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)	1	20.00			20	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)	1				1.00	Each

### **CHOWKS**

#### MC WAZIRABAD

### DETAILED COST ESTIMATE

#### **SUMMARY**

Sr. No.	Description	Amount (Rs.)
1	ROAD WORKS	
1.1	CP-02 TELEPHONE EXCHANGE CHOWK	6,645,119
1.2	CP-03 HAJI PURA CHOWK	7,202,532
	1) Total Amount. Rs.	13,847,651
2	DRAINAGE SYSTEM	
2.1	CP-03 HAJI PURA CHOWK	1,936,265
	2) Total Amount. Rs.	1,936,265
	Total Amount (R.)	15,783,915
	Say Millions	15.784

#### DETAILED COST ESTIMATE

#### **CP-02 TELEPHONE EXCHANGE CHOWK**

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Scarifying				
1	18/11	Scarifying old road surface including removal of debris within 1 chain (30 m).	100Sft	201.56	424.60	85,582
		Prime Coat				
2	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	201.56	2,309.00	465,402
		Carpeting				
		AWC				
3	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.	201.56	16,676.12	3,361,239
					·	
		Paint For Traffic Lanes				
4	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	1,030.00	56.35	58,041
		Kerb Stone				
5	6/52/b	Providing and fixing precast Edge Kerb Stone (4" to 6" thick), of 3500 PSI Compressive Strength, embedded in PCC 1:2:4 over lean concrete 1:4:8 etc. complete in all respect.				
		b) With Painting				
		(i) 14" high	P.Rft	100.00	518.90	51,890

#### DETAILED COST ESTIMATE

#### **CP-02 TELEPHONE EXCHANGE CHOWK**

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
6	10/41	Tuff Paver 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	12,746.00	192.80	2,457,429
		D C C (D )				
7	6/5	P.C.C (Between Asphalt and Tuff Paver)  Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(f) Ratio 1: 2: 4	100Cft	1.14	38,271.80	43,630
	10/20	Cat Eyes				
8	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	100.00	693.90	69,390
9	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	12.00	950.25	11,403

#### DETAILED COST ESTIMATE

#### **CP-02 TELEPHONE EXCHANGE CHOWK**

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
10	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	22.00	1,260.85	27,739
11	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	12.00	1,114.60	13,375
		Total Amount Rs.				6,645,119
			·			

### **CP-02 TELEPHONE EXCHANGE CHOWK**

### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Scarifying						
1	Scarifying old road surface including removal of debris						
	within 1 chain (30 m).						
	RD 0+000 TO 0+264	1	264	50.00		13,200	Sft
	RD 0+000 TO 0+148	1	148	47.00		6,956	Sft
					Total	20,156	Sft
					Total.	201.56	%Sft
	Prime Coat				10001	201.00	,0010
2	Providing and laying bituminous priming coat, using 10						
	lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5						
	Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 TO 0+264	1	264	50.00		13,200	Sft
	RD 0+000 TO 0+148	1	148	47.00		6,956	Sft
	1000100110	1	110	17.00	Total	20,156	Sft
					Total	20,130	- Sit
					Total.	201.56	%Sft
	AWC						
3	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 0+264	1	264	50.00		13,200	Sft
	RD 0+000 TO 0+148	1	148	47.00		6,956	Sft
					Total	20,156	Sft
					Total.	201.56	%Sft
	Paint For Traffic Lanes						
4	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 0+264	2.5	264			660	Rft
	RD 0+000 TO 0+148	2.5	148			370	Rft
					Total.	1,030	Rft
					Total.	1,030	MI

### **CP-02 TELEPHONE EXCHANGE CHOWK**

### CALCULATION OF QUANTITES

-	I .						
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
5	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	100			100	Rft
					Total.	100	Rft
	Tuff Paver						
6	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 0+264	1.5	264	13.50		5,346	
	RD 0+000 TO 0+148	2	148	25.00		7,400	
					Total.	12,746	Sft
	P.C.C (Between Asphalt and Tuff Paver)						
7	Cement concrete plain including placing, compacting,						
<b>'</b>	finishing and curing complete (including screening and						
	washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 TO 0+264	1.5	264	0.33	0.50	65	Cft
	RD 0+000 TO 0+148	2	148	0.33	0.50	49	Cft
					Total.	1.14	%Cft
	Cat Eyes						
8	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	100				100	Each

### **CP-02 TELEPHONE EXCHANGE CHOWK**

### CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
9	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	2	3.00	2.00		12	Sft
10	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	1					
	(b) 3 inch diameter	2	11			22	Rft
11	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					12	Sft

### **DETAILED COST ESTIMATE**

### CP-03 HAJI PURA CHOWK

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		ROAD WORK				
		Scarifying				
1	18/11	Scarifying old road surface including removal of				
		debris within 1 chain (30 m).	100Sft	320.36	424.60	136,025
		Prime Coat				
2	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	320.36	2,309.00	739,711
		Carpeting				
		AWC				
3	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)	Per inch thickness per			
	1/1	(iv) 4.5% Bitumen	100Sft.	320.36	16,676.12	5,342,362
		Paint For Traffic Lanes				
4	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	2,793.00	56.35	157,386
		Kerb Stone				
5	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	450.00	518.90	233,505

### **DETAILED COST ESTIMATE**

### CP-03 HAJI PURA CHOWK

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		Tuff Paver				
6	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	1,935.00	192.80	373,068
		P.C.C (For Retaining Tuff Paver)				
7	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	0.75	38,271.80	28,704
		Cat Eyes				
8	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	125.00	693.90	86,738
9	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	24.00	950.25	22,806

### **DETAILED COST ESTIMATE**

### CP-03 HAJI PURA CHOWK

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
10	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	44.00	1,260.85	55,477
11	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	24.00	1,114.60	26,750
		Total Amount Rs.				7,202,532
		Drainage System				
		Excavation				
1	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	2.59	9,055.25	23,453
		P.C.C.				
2	6/5	P.C.C  Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):				
		(i) Ratio 1: 4: 8	100Cft	0.67	29,598.20	19,831

### **DETAILED COST ESTIMATE**

### CP-03 HAJI PURA CHOWK

Sr. No	2nd BI- Annual-2022 (July to Dec) Gujranwala	Description	Unit	Quantity	Unit Rate (Rs.)	Amount (Rs.)
		R.C.C Work				
3	6/6/a/i/3	Providing and laying reinforced cement concrete (i/c pre-stressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete				
		(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-				
		(2) Type B (nominal mix 1: 1½: 3)	Cft	240.00	512.90	123,096
		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.  (2) Type B (nominal mix 1: 1½: 3)	P Cft	845.00	612.05	517,182
		Steel				
4	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	39.38	31,808.25	1,252,702
		Total Amount Rs.				1,936,265
		Total Amount Rs. (1+2)				9,138,796

### CP-03 HAJI PURA CHOWK CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	Scarifying						
1	Scarifying old road surface including removal of debris within 1 chain (30 m).						
	RD 0+000 TO 0+425	1	425	52.00		22,100	Sft
	RD 0+000 TO 0+100	1	100	30.00		3,000	Sft
	RD 0+000 TO 0+127	2	127	24.00		6,096	Sft
	RD 0+000 TO 0+040	1	40	21.00		840	Sft
					Total	22.026	CC
					Total	32,036	Sft
	Prime Coat				Total.	320.36	%Sft
2	Providing and laying bituminous priming coat, using 10						
2	lbs. kerosene oil and 10 lbs. binder per 100 Sft. or 0.5						
	Kg kerosene and 0.5 Kg binder per square metre.						
	RD 0+000 TO 0+425	1	425	52.00		22,100	Sft
	RD 0+000 TO 0+100	1	100	30.00		3,000	Sft
	RD 0+000 TO 0+127	2	127	24.00		6,096	Sft
	RD 0+000 TO 0+040	1	40	21.00		840	Sft
					Total	32,036	Sft
					Total.	320.36	%Sft
	AWC						
3	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 0+425	1	425	52.00		22,100	Sft
	RD 0+000 TO 0+100	1	100	30.00		3,000	Sft
	RD 0+000 TO 0+127	2	127	24.00		6,096	Sft
	RD 0+000 TO 0+040	1	40	21.00		840	Sft
					Total	32,036	Sft
						·	
	Paint For Traffic Lanes				Total.	320.36	%Sft
4	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 0+425	5	425			2,125	Rft
	RD 0+000 TO 0+100	2.5	100			250	Rft
	RD 0+000 TO 0+127	2.5	127			318	Rft

### CP-03 HAJI PURA CHOWK CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
	RD 0+000 TO 0+040	2.5	40			100	Rft
					Total.	2,793	Rft
					Total.	2,193	KIt
5	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 0+425	2	225			450	Rft
					Total.	450	Rft
	Tuff Paver						
6	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 0+100	1	100	13.00		1,300	Sft
	RD 0+000 TO 0+127	1	127	5.00		635	Sft
					Total.	1,935	Sft
	P.C.C (For Retaining Tuff Paver)						
7	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(f) Ratio 1: 2: 4						
	RD 0+000 TO 0+100	2	100	0.33	0.50	33	Cft
	RD 0+000 TO 0+127	2	127	0.33	0.50	42	Cft
					Total.	0.75	%Cft
	Cat Eyes						

### CP-03 HAJI PURA CHOWK CALCULATION OF QUANTITES

Sr.							
Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
8	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	125				125	Each
9	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	4	3.00	2.00		24	Sft
10	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	4	11			44	Rft
11	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					24	Sft
	Drainage System						
	Excavation Excavation						
1	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.						
	Culvert	1	40	9.25	7.00	2,590	Cft
L	- Californ	1	-10	7.23	7.00	2,370	CIT

### CP-03 HAJI PURA CHOWK CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
					Total	2,590	Cft
					Total	2.59	%oCft
	P.C.C						
2	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate):						
	(i) Ratio 1: 4: 8						
	Culvert	2	40	3.33	0.25	67	Cft
					Total	0.67	%Cft
	R.C.C Work						
3	Providing and laying reinforced cement concrete (i/c prestressed concrete), using coarse sand and screened graded and washed aggregate, in required shape and design, i/c forms, moulds, shuttering, lifting, compacting, curing, rendering and finishing exposed surface, complete (but excluding the cost of steel reinforcement, its fabrication and placing in position, complete						
	(a)(iii) Reinforced cement concrete in slab of rafts / strip foundation, base slab of column and retaining walls; etc and footing beams, other structural members other than those mentioned in 6(a) (i)&(ii) above not requiring form work (i.e. horizontal shuttering) complete in all respects:-						
	(2) Type B (nominal mix 1: 1½: 3)	2	40	3.00	1.00	240	Cft
					Total	240.00	Cft
	a).(i) Reinforced cement concrete in roof slab, beams, columns, lintels, girders and other structural members laid in situ or pre-cast laid in position, or pre-stressed members cast in situ, complete in all respect. Type C (nominal mix 1:2:4)						
	Wall	2	40.00	1.00	6.00	480.00	Cft
	Top Slab	1	40.00	8.50	1.00	340.00	Cft
	Parapet Wall	2	10.00	0.50	2.50	25.00	Cft
					Total	845.00	Cft
	Steel						

### CP-03 HAJI PURA CHOWK CALCULATION OF QUANTITES

Sr. No	Description	No.	Length	Width	Height	Qty.	Unit.
4	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		1,085	Cft @	8.00	8,680	lbs/cft
						3,938	kg
					Total	39.38	Kg



### **DETAILED COST ESTIMATE**

### ENVIRONMENTAL HEALTH SAFETY BUDGET

Sr No	Description	Unit	Quantity	Unit Rate (Rs.)	Amount Rs.
	Labor Safety				
1	Face Masks (3 PLY)	Nos	28.00	700.00	19,600
2	Safety Gum Shoes	Nos	28.00	1,350.00	37,800
3	Hand Gloves	Nos	28.00	245.00	6,860
4	First Aid Box	1105	20.00	213.00	0,000
·	(Including essential Medicine)	Nos	7.00	5,000.00	35,000
5	Safety Hard Helmets MSA	Nos	28.00	2,000.00	56,000
6	Safety Goggles	Nos	28.00	550.00	15,400
7	Reflective Safety Vests	Nos	28.00	550.00	15,400
8	Infrared Thermometer				,
	(Benetech GM-2200 OR equivalent)	Nos	1.00	45,000.00	45,000
				Sub Total	231,060
	Working Site Safety				
1	Reflective Safety Signs Boards	Nos	7.00	10,000.00	70,000
2	Reflective Safety Barricading Tape	Nos	21.00	1,500.00	31,500
3	Emergency Portable Light	Nos	8.00	5,000.00	40,000
4	Solid Waste Collection Drums	Nos	8.00	5,000.00	40,000
5	Fire Extinguishers DCP	Nos	16.00	5,000.00	80,000
6	Reflective Safety PVC Cones (18 inch)	Nos	28.00	1,200.00	33,600
7	Road Guiding Portable Delineators with Chain	Nos	28.00	2,500.00	70,000
				Sub Total	365,100
	Others				
1	Pole Hanging Waste Bins	Nos.	10.00	10,000	100,000
2	Water Sprinkling				
	(Dust Abatement)	L.S	1.00	200,000	200,000
3 4	Roadside Plantation Environmental Analytical Assessments (Ambient Air Quality Testing, Noise Testing, Vehicular Emissions Testing/Generators, Surface	L.S	1.00	50,000	50,000
	Water & Ground Water Testing)	L.S	1.00	250,000	250,000
5	Hiring of Environmentalist				
	(03 Months Budget)	L.S	1.00	250,000	250,000
6	Labor Campsite Management	L.S	1.00	200,000	200,000
				Sub Total	1,050,000
	Total Amount (Rs)				1,646,160

**RATE ANALYSIS** 

### EARTH WORK LEAD CHART

### Rate Analysis Road- 1

Sr. No.	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Lead	Unit.	Qty	Rate (Rs)	Amount (Rs)
1	3/5/i	Earthowrk in ordinary soil for embankments lead upto 100 ft. (30 m), including ploughing and mixing with blade grade or disc harrow or other suitable equipment, and compaction by mechanical means at optimum moisture content and dressing to designed section, complete in all respects:-					
		i) 95% to 100% maximum modified AASHO dry density.	1	1000Cft	1	9,552.55	9,552.55
2	3/17a.b.c	Carriage					
		upto ¼ mile (400 m).	1	1000 Cft	1	4,341.40	4,341.40
		for every 330 ft. (100 m) additional lead or part thereof, beyond ¼ mile (400 m) upto one mile. (1.6 Km.)	12	1000 Cft	1	40.25	483.00
		for every ¼ mile (400 m) additional lead or part thereof, beyond one mile (1.6 Km.) upto 5 mile (8 Km).	8.5	1000 Cft	1	338.75	2,879.38
		for every ½ mile (800 m) additional lead or part thereof, beyond 5 miles (8 Km).	0	1000 Cft	1	320.70	-
		Total Amount 1,000 (Rs.).					17,256.33
		Total Amount Per Cft					17.26

### Rate Analysis Road- 2

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

Crusl	n Stone						90 KM
Sr. No.	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs)
1	10.0 (1)	Material	100.00	1		7.545.00	7.545.00
	18-3 a(i)	i) Pit run or bed run gravel.	100 Cft	1	1	7,545.00	7,545.00
2	-	Carriage	100.00		1.20	200.40	270.20
	1	1st KM	100 Cft	1	1.20	299.40	359.28
		2nd KM	100 Cft	1	1.20	145.45	174.54
		3rd KM	100 Cft	1	1.20	117.00	140.40
		4th KM	100 Cft	1	1.20	85.40	102.48
	1/1	5th KM	100 Cft	1	1.20	80.25	96.30
	] 1/1	6th KM	100 Cft	1	1.20	79.10	94.92
		7th KM	100 Cft	1	1.20	74.30	89.16
		8th KM	100 Cft	1	1.20	73.60	88.32
		9th KM	100 Cft	1	1.20	69.60	83.52
		10th KM	100 Cft	1	1.20	65.75	78.90
		From 11 km to 200 km	100 Cft	80.00	1.20	57.30	5,500.80
		Total.					14,353.62
		Total Amount per 100 Cft					14,353.62
		Total Cost for Per Cft					143.54

### Rate Analysis Road - 3

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

							200 KM
Sr. No.	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/4(a)	Providing and laying base course of crushed stone (Water Bound Macadam) of approved quality and grade including, placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHTO dry density, including carriage of all material to site of work complete in all respect as per specifications and as directed by the engineer incharge. (Crushed stone aggregate from sargodha querry to site, actual compacted depth shall be considered for payment)			1	14,122.50	14,122.50
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	299.40	365.27
		2nd KM	100 Cft	1	1.22	145.45	177.45
	-	3rd KM	100 Cft	1	1.22	117.00	142.74
	-	4th KM	100 Cft	1	1.22	85.40	104.19
	-	5th KM	100 Cft	1	1.22	80.25	97.91
		6th KM	100 Cft	1	1.22	79.10	96.50
	-	7th KM	100 Cft	1	1.22	74.30	90.65
	-	8th KM	100 Cft	1	1.22	73.60	89.79
	-	9th KM	100 Cft	1	1.22	69.60	84.91
	1	10th KM	100 Cft	1	1.22	65.75	80.22
		From 11 km to 200 km	100 Cft	190.00	1.22	57.30	13,282.14
		Total.					28,734.26
		Total Amount per 100 Cft					28,734.26
							40=41
		Total Cost for Per Cft					287.34

### Rate Analysis Road - 4

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

							232 Km
Sr. No.	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description	Unit	Lead (Km)	Qty	Rate (Rs)	Amount (Rs.)
1	18/10/a	Providing and laying plant premixed bituminous	Per inch				
	10/10/α	carpet, including compaction and finishing to	thickness				
		required camber, grade and density. (2 inch	per				
			100Sft.				
		thick)					
		(iv) 4.5% Bitumen			1.00	15,187.40	15,187.40
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., VM	100.00	1	0.1042	200.40	27.22
		1st KM 2nd KM	100 Cft 100 Cft	1	0.1243 0.1243	299.40 145.45	37.22 18.08
	1/1	3rd KM	100 Cit	1	0.1243	117.00	14.54
	1/1	4th KM	100 Cft	1	0.1243	85.40	10.62
		5th KM	100 Cft	1	0.1243	80.25	9.98
		6th KM	100 Cft	1	0.1243	79.10	9.83
		7th KM	100 Cft	1	0.1243	74.30	9.24
		8th KM	100 Cft	1	0.1243	73.60	9.15
		9th KM	100 Cft	1	0.1243	69.60	8.65
		10th KM	100 Cft	1	0.1243	65.75	8.17
		From 11 km to 200 km	100 Cft	190	0.1243	57.30	1,353.25
		Total.					16,676.12
		Total Amount per 100 Sft					16,676.12
		_					
		Total Cost for Per Sft					166.76

### Rate Analysis Road - 5

Ploughing and Compaction of Existing road surface upto 6" depth i/c dressing, leveling, supplying and spreading of stone screening (Khaka) and compaction to achieve to 100% maximum ASSHO dry density complete in all respects.

### MRS 2nd Bi-Annual July 2022 to Dec 2022

	Taking = 100CFT	Unit rate =Per 100 CFT					
Sr. No.	Details	Qty	Unit	Rate (Rs)	Amount (Rs)		
A	<u>Material</u>						
1	Ploughing with tractor up to 6" depth for 100 Cft (Input Rate EQ-18)	1	P.Hour	1,608.00	1,608.00		
2	Cost of Stone Screening (Khaka) at quarry for 100 Cft = (Input Rate 18.005)	17	%CFT	4,836.00	822.12		
3	Labour charges for spreading of Khaka dressing and levelling etc skilled 2 No's for 1.5 Hours (Input Rate lb-024)		P.Day	1,250.00	468.75		
4	Compaction of existing road surface with 12 to roller and watering etc. for 100Cft (Input Rate EQ-05)	0.75	P.Hour	3,660.00	2,745.00		
				Total	5,643.87		
	Add 20% C	ontracto	r Profit on	Item No.2	164.42		
		Comp	osite Rate	Per 100Cft	5,808.29		

	Rate Analys	sis Ro	ad - 6		
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)

Mar	hole Co	ver						Unit.	Each		
Sr.	Ref	Detail			Ţ	Unit Rate (British System) per 100 Rf					
No.	Input Rate	Detail			Qty		Rate Per Unit		Amount (Rs.)		
	Page No112										
1	A	RPC Manhole Cover			1.00	No	7000	No	7,000.00		
		Carriage							700		
								Total	7,700.00		
		LABOUR									
2	LB-024	Skilled Cooly			0.50	Nos.	1,250.00	per day	625.00		
								Total.	625.00		
		Sundries	10	%					62.50		
							Tota	l Rs.	687.50		
							Total	(1+2)	8,387.50		
		Contractor's Profit	20	%					1,677.50		
		Total							10,065		
		ITEM RATES									
		Composite rate Set						Rs.	10,065		

Rate	Analy	vsis I	Road	- 7
ixatt	Allai	1 212 1	<b>N</b> Uau	-,

		Tute Hindigsis House .				
						200 KM
Sr. No.	2nd BI-Annual- 2022 (July to Dec) Gujranwala	Description		Lead (Km)	Rate (Rs)	Amount (Rs.)
	4.4					
1	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	299.40	299.40
	-	2nd KM	100 Cft	1	145.45	145.45
	-	3rd KM	100 Cft	1	117.00	117.00
	-	4th KM	100 Cft	1	85.40	85.40
		5th KM	100 Cft	1	80.25	80.25
		6th KM	100 Cft	1	79.10	79.10
		7th KM	100 Cft	1	74.30	74.30
		8th KM	100 Cft	1	73.60	73.60
		9th KM	100 Cft	1	69.60	69.60
		10th KM	100 Cft	1	65.75	65.75
		From 11 km to 200 km	100 Cft	190.00	57.30	10,887.00
		Total.				11,976.85
		Total Amount per 100 Cft				11,976.85
		Total Cost for Per Cft				119.77

Rate Analysis Road - 8									
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	)	T						Unit.	Each
Sr.	Ref	Ref Input Detail				Unit R	Rate (British	System) p	er Each
No.	Rate	Detail			Qty	7	Rate Pe	r Unit	Amount (Rs.)
1	MR	LCP			1.00	No	186,030	No.	186,030
								Total	186,030
		Contractor's Profit	20	%					37,206
		Total							223,236
		ITEM RATES							
		Composite rate Set						Rs.	223,236

Rate Analysis Road - 9										
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	)	T						Unit.	Each			
Sr.	Ref	Detail				Unit Rate (British System) per Each						
No.	Input Rate	Detail	Qty	7	Rate Pe	r 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			

Rate	Anal	lysis	Road	-	10
------	------	-------	------	---	----

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.

•	T						Unit.	Each			
Ref	Detail				Unit Rate (British System) per Each						
Rate					7	Rate Pe	er Unit	Amount (Rs.)			
MR	LCP			1.00	No	270,855	No.	270,855			
							Total	270,855			
	Contractor's Profit	20	%					54,171			
	Total							325,026			
	ITEM RATES										
	Composite rate Set						Rs.	325,026			
	Input Rate	Ref Input Rate  MR LCP  Contractor's Profit  Total  ITEM RATES	Ref Input Rate  MR LCP  Contractor's Profit 20  Total  ITEM RATES	Ref Input Rate  MR LCP  Contractor's Profit  Total  ITEM RATES	Ref Input Rate         Detail         Qty           MR LCP         1.00           Contractor's Profit         20 %           Total         ITEM RATES	Ref	Ref	Ref Input Rate   Detail   De			

### **Analysis of Rate for Pole**

### Description

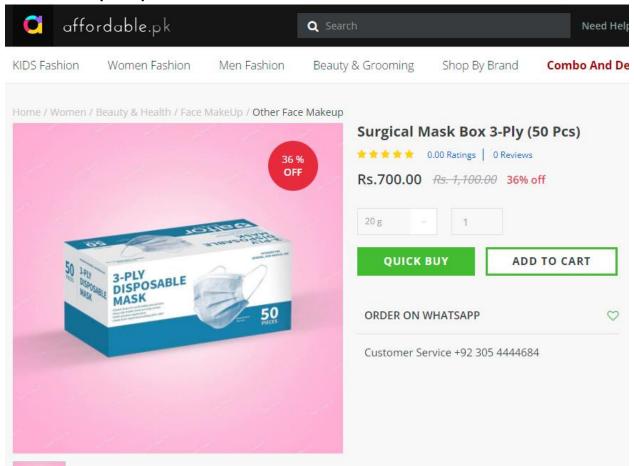
Supply Installation testing and Comissioning of 20'/6 Mtrs high Tubular Section Road Light Pole made of MS, Hot dip Galvanized including cost of base plate with 4 Nos J-bolt, as shown on dwg. Terminal box with cover, 2amp single pole Mcb, 3 phase connector complete in all resheet.

Unit. Each

Sr.	Ref		D-4-9			Unit F	Rate (British System) per Each			
No.	Input Rate		Detail		Qty		Rate Per Unit		Amount (Rs.)	
1	MR	20/6 m Light Pole		-	1.00	No	39,780	No.	39,780	
								Total	39,780	
		Contractor's Profit	20	) %					7,956	
		Total							47,736	
		ITEM RATES								
		Composite rate Set						Rs.	47,736	

### **Cost for PPEs from different Sources**

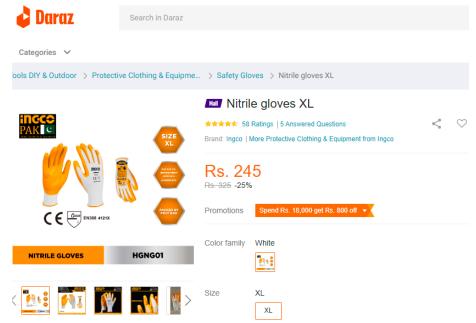
### 1. Face Masks (3PLY)



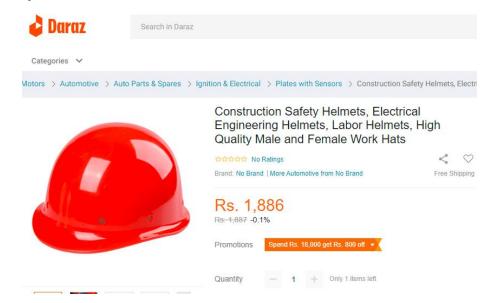
### 2. Safety Gum Shoes



### 3. Hand Gloves



### 4. Safety Hard helmets



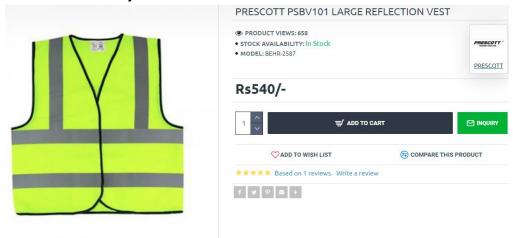
### 5. Safety Goggles



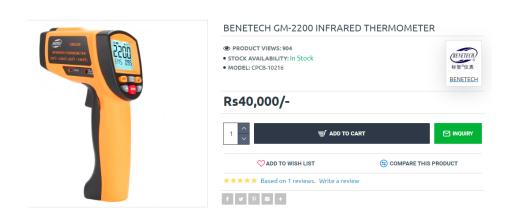
#### **Product Specification:**

- 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



### 7. Infrared Thermometer



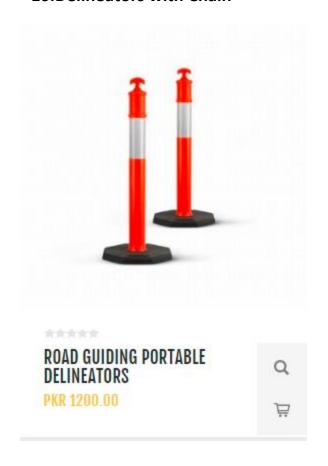
### 8. Fire Extinguishers



### 9. PVC Cones and Delineators



### **10.Delineators with Chain**









### 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. ( <b>Double Arm</b> )	1	No.	42,705.00	42,705.00
	TOTAL AMOUNT R	ls: -			82,485.00

For Ali Engineering Services

MOHSIN PERVAIZ Head Planning Div. **ALI SHAFQAT**Director Operations

### 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/	Coaster/	Buses	Trucks	Trucks	Trucks
		Pickup	Mini Ducoc		2-AXLE	3-AXLE & 4-	5-AXLE &
		Ріскир	Mini Buses		Z-AXLE	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/	Coaster/	Buses	Trucks	Trucks	Trucks
		Pickup	Mini Buses		2-AXLE	3-AXLE & 4-	5-AXLE &
		Ріскир	Willii Buses		Z-AALE	AXLE	6-AXLE
Base Year(2022)	25	20	20	15	15	15	15
2029	20	15	15	10	10	10	10
2037	15	10	10	10	10	10	10

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

Rs/Km

									KS/ KIII
SPEEDS	MOTOR	RICKSHAW	CAR	WAGON	MINI-BUS	BUS	TRUCK	TRUCK	TRUCK
	CYCLE						2-AXLE	3-AXLE & 4-AXLE	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

									113, 1111
SPEEDS	MOTOR	RICKSHAW	CAR	WAGON	MINI-BUS	BUS	TRUCK	TRUCK	TRUCK
	CYCLE						2-AXLE	3-AXLE & 4- AXLE	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
	2.33		13.,,	1,.,0	21.03	11.00	31.,,	33.30	10.10
								<u> </u>	

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 occupantsin financial terms (Rs./Hour)	396.04	1485.15	2376.24	3158.42	346.53	6683.17
Travel Time Value of occupantsin 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
Wazirabad (5.72 km)
ANNUAL VEHICLE OPERATING COST
WITHOUT PROJECT

	(						
Years	Voc/Km (Rs.)	Traffic Volume ADT	Distance Annual Km	Total Cost Million Rs.			
Motor Cycles\Rickshaw Base Year(2022) 2029 2037	4.26	2600	2,088	23.15			
	4.57	4420	2,088	42.22			
	5.05	7956	2,088	83.90			
Cars  Base Year(2022)  2029  2037	39.47	420	2,088	34.61			
	42.43	714	2,088	63.25			
	47.21	1285	2,088	126.67			
<b>Wagons</b> Base Year(2022)  2029  2037	43.08	5	2,088	0.43			
	47.89	8	2,088	0.81			
	57.04	15	2,088	1.74			
Bus  Base Year(2022)  2029  2037	82.34	3	2,088	0.46			
	97.79	5	2,088	0.93			
	97.79	8	2,088	1.67			
T.Trolly + Trucks 2-AXLE  Base Year(2022)  2029  2037	86.88	12	2,088	2.22			
	103.44	21	2,088	4.49			
	103.44	37	2,088	8.08			
Trucks 3-AXLE & 4-AXLE  Base Year(2022)  2029  2037	92.52	0	2,088	-			
	109.08	0	2,088	-			
	109.08	0	2,088	-			
Trucks 5-AXLE & 6-AXLE  Base Year(2022)  2029  2037	98.16	0	2,088	-			
	114.72	0	2,088	-			
	114.72	0	2,088	-			
<b>TOTAL</b> Base Year(2022)  2029  2037				60.87 111.69 222.05			

Note: "VOC" means Vehicle Operating Cost

TABLE - 9.7
Wazirabad (5.72 km)
ANNUAL VEHICLE OPERATING COST
WITH PROJECT

				(Million Rs.)
	Voc/Km	Traffic Volume	Distance	Total Cost
Years	(Rs.)	ADT	Annual	Million Rs.
			Km	
Motor Cycles\Rickshaw				
Base Year(2022)	2.65	2600	2,088	14.38
2029	2.72	4420	2,088	25.10
2037	2.84	7956	2,088	47.21
Cars				
Base Year(2022)	19.16	420	2,088	16.80
2029	19.92	714	2,088	29.70
2037	21.00	1285	2,088	56.35
Wagons				_
Base Year(2022)	18.83	5	2,088	0.19
2029	19.67	8	2,088	0.33
2037	20.80	15	2,088	0.63
Bus				
Base Year(2022)	36.21	3	2,088	0.20
				0.35
2029	37.40	5	2,088	
2037	39.13	8	2,088	0.67
T.Trolly + Trucks 2-Axle				
Base Year(2022)	22.77	12	2,088	0.58
2029	23.75	21	2,088	1.03
2037	25.05	37	2,088	1.96
			,	
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	34.85	0	2,088	-
2029	37.60	0	2,088	-
2037	41.08	0	2,088	-
Trucks 5-AXLE & 6-AXLE	00.00			
Base Year(2022)	39.06	0	2,088	-
2029	41.80	0	2,088	-
2037	45.28	0	2,088	-
TOTAL				
Base Year(2022)				32.15
2029				56.52
2037				106.82
				100.02
	<u> </u>	<u> </u>		

Note: "VOC" means Vehicle Operating Cost

TABLE - 9.8 Wazirabad (5.72 km)

VEADC	VEHICLE OP	CAMBICC	
YEARS	WITHOUT WITH PROJECT PROJECT		SAVINGS
Base Year(2022)	60.87	32.15	28.72
2029	111.69	56.52	55.17
2037	222.05	106.82	115.23
		TOTAL	199.12

TABLE - 9.9
Wazirabad (5.72 km)
ANNUAL VALUE OF TRAVEL TIME COST
WITHOUT PROJECT

	I 1/2-	T - (C	D: 1	(Million Rs.)
	VOT	Traffic Volume	Distance	Total Cost
Years	Rs/km	ADT	Annual	Million Rs.
			( Km)	
Motor Cycles\Rickshaw				
Base Year(2022)	3.96	2600	2,088	21.50
2029	4.95	4420	2,088	45.68
2037	6.60	7956	2,088	109.64
Cars				
Base Year(2022)	14.85	420	2,088	13.02
2029	18.56	714	2,088	27.67
2037	24.75	1285	2,088	66.42
	15		_,000	33
Wagons				
Base Year(2022)	29.70	5	2,088	0.30
2029	39.60	8	2,088	0.67
2037	59.41	15	2,088	1.81
1	33.11	13	2,000	1.01
Bus				
Base Year(2022)	39.48	3	2,088	0.22
2029	52.64	5	2,088	0.50
2037	78.96	8	2,088	1.35
233,	70.50	· ·	2,000	1.55
T.Trolly + Trucks 2-Axle				
Base Year(2022)	5.78	12	2,088	0.15
2029	8.66	21	2,088	0.38
2037	8.66	37	2,088	0.68
			_,000	0.00
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	5.78	0	2,088	_
2029	8.66	0	2,088	_
2037	8.66	0	2,088	_
2037	0.00	· ·	2,000	
Trucks 5-AXLE & 6-AXLE	<del> </del>			
Base Year(2022)	5.78	0	2,088	_
2029	8.66	0	2,088	_
2037	8.66	0	2,088	_
2037	5.00		2,000	_
TOTAL				
Base Year(2022)				35
2029				75
2037				180
]				

Note :"VOT" means value of Travel Cost

# TABLE - 9.10 Wazirabad (5.72 km) ANNUAL VALUE OF TRAVEL TIME COST WITH PROJECT

	VOT	Traffic Volume	Distance	(Million Rs.)  Total Cost
Years	Rs/km	ADT	Annual	Million Rs.
			( Km)	
Motor Cycles\Rickshaw				
Base Year(2022)	2.65	2600	2,088	14.38
2029	2.72	4420	2,088	25.10
2037	2.84	7956	2,088	47.21
Cars				
Base Year(2022)	19.16	420	2,088	16.80
2029	19.92	714	2,088	29.70
2037	21.00	1285	2,088	56.35
Wagons				
Base Year(2022)	18.83	5	2,088	0.19
2029	19.67	8	2,088	0.33
2037	20.80	15	2,088	0.63
Bus				
Base Year(2022)	36.21	3	2,088	0.20
2029	37.40	5	2,088	0.35
2037	39.13	8	2,088	0.67
T.Trolly + Trucks 2-Axle				
Base Year(2022)	22.77	12	2,088	0.58
2029	23.75	21	2,088	1.03
2037	25.05	37	2,088	1.96
Trucks 3-AXLE & 4-AXLE				
Base Year(2022)	34.85	0	2,088	-
2029	37.60	0	2,088	-
2037	41.08	0	2,088	-
Trucks 5-AXLE & 6-AXLE				
Base Year(2022)	39.06	0	2,088	-
2029	41.80	0	2,088	-
2037	45.28	0	2,088	-
TOTAL				
Base Year(2022)				32.15
2029				56.52
2037				106.82

#### TABLE - 9.11 Wazirabad (5.72 km)

YEARS	ANNUAL VALUE OF	SAVINGS	
	WITHOUT	WITH	
	PROJECT	PROJECT	
Base Year(2022)	35.18	32.15	3.04
2029	74.90	56.52	18.38
2037	179.89	179.89 106.82	
		TOTAL	94.49

# TABLE - 9.12 Wazirabad (5.72 km) TOTAL PROJECT BENEFITS

YEARS	SAVI	TOTAL SAVINGS	
	voc	VOTT	
Base Year(2022) 2029 2037	28.72 55.17 115.23	3.04 18.38 73.07	31.76 73.55 188.30
		TOTAL	294

TABLE - 9.13
Wazirabad (5.72 km)
Calculation of Economic Internal Rate of Return

	PRO	JECT ECONOMIC (	OSTS	Project	Ne	et Benefits Patterr	n at Economic Pri	ces
Years	Investment	0 & M	Total	Economic				
			Costs	Benefits	(a)	(b)	(c)	(d)
1	187.00	0.00	187.00	0.00	-187.00	-187.00	-205.70	-205.70
2		0.94	0.94	31.76	30.82	27.65	30.73	27.56
3		0.94	0.94	36.52	35.59	31.94	35.49	31.84
4		0.94	0.94	42.00	41.07	36.87	40.97	36.77
5		0.94	0.94	48.30	47.37	42.54	47.27	42.44
6		0.94	0.94	55.55	54.61	49.06	54.52	48.96
7		0.94	0.94	63.88	62.94	56.56	62.85	56.46
8		0.94	0.94	73.46	72.53	65.18	72.43	65.09
9		0.94	0.94	84.48	83.55	75.10	83.45	75.00
10		0.94	0.94	97.15	96.22	86.50	96.12	86.41
11		0.94	0.94	102.01	101.08	90.87	100.98	90.78
12		0.94	0.94	107.11	106.18	95.47	106.08	95.37
13		0.94	0.94	112.47	111.53	100.29	111.44	100.19
14		0.94	0.94	118.09	117.16	105.35	117.06	105.25
15		0.94	0.94	123.99	123.06	110.66	122.97	110.57
Total :	187.00	13.09	200.09	3906.20	896.70	787.02	876.69	767.01
DISCO	OUNT RATES	PRESENT WO	PTH OF COST	Present Worth		NET PRESE	NT WORTH	
Disco	ONT NATES	TRESERT WO	KIII OI CO31	of Benfefit		IVET FRESE	WOKIII	
	10 %	170.00	176.26	608.34	271.04	226.31	253.41	208.68
	12 %	166.96	172.50	475.22	210.78	172.45	193.53	155.20
	18 %	158.47	162.44	256.80	89.44	64.25	73.20	48.01
	20 %	155.83	159.43	216.54	62.51	40.32	46.57	24.38
ECONOMIC INTERNAL RATE OF RETURN 12% DR 26.89 24.56 24.77				22.56				
BENEFIT C	OST / RATIO AT 1	L2 % D.R		2.75				

 $<sup>\</sup>mbox{*}$  A factor of 0.9 has been used for Capital Cost and O&M  $\,$  Cost in the Economics Terms.

<sup>(</sup>a) Base Case assuming 10 Years period of analysis.

<sup>(</sup>b) Benefits decreased by 10 %

<sup>(</sup>c) Cost over-run by 10 %

<sup>(</sup>d) Benefit reduction and cost over-run both occuring simultaneously.

TABLE - 9.14
Wazirabad (5.72 km)
Calculation of Financial Internal Rate of Return

	PROJI	ECT ECONOMIC (	COSTS	Project	Net Benefits Pattern at Economic Prices			
Years	Investment	O & M	Total	Financial				
			Costs	Revenue	(a)	(b)	(c)	(d)
1	187.00	0.00	187.00	0.00	-187.00	-187.00	-205.70	-205.70
2		0.00	0.00	0.00	0.00	0.00	0.00	0.00
3		0.00	0.00	0.00	0.00	0.00	0.00	0.00
4		0.00	0.00	0.00	0.00	0.00	0.00	0.00
5		0.00	0.00	0.00	0.00	0.00	0.00	0.00
6		0.00	0.00	0.00	0.00	0.00	0.00	0.00
7		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10		0.00	0.00	0.00	0.00	0.00	0.00	0.00
			_					
Total :	187.00	0.00	187.00	0.00	-187.00	-187.00	-205.70	-205.70

DISCOUNT RATES	PRESENT WO	RTH OF COST	Present Worth of Revenue	NET PRESENT WORTH			
10 %	170.00	170.00	0.00	-170.00	-170.00	-187.00	-187.00
12 %	166.96	166.96	0.00	-166.96	-166.96	-183.66	-183.66
18 %	158.47	158.47	0.00	-158.47	-158.47	-174.32	-174.32
20 %	155.83	155.83	0.00	-155.83	-155.83	-171.42	-171.42
FINANCIAL INTERNAL RATE OF RETURN 12% DR			#NUM!	#NUM!	#NUM!	#NUM!	
BENEFIT COST / RATIO AT 12 % D.R 0.00							

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

<sup>(</sup>a) Base Case assuming 10 Years period of analysis.

<sup>(</sup>b) Benefits decreased by 10 %

<sup>(</sup>c) Cost over-run by 10 %

<sup>(</sup>d) Benefit reduction and cost over-run both occuring simultaneously.

# **Annexure-D Gant Chart**

### TENTATIVE PROJECT IMPLEMENTATION SCHEDULE FOR IMPROVEMENT & CONSTRUCTION OF ROADS IN Wazirabad CITY YEAR (2022-2023)

Road & Chowk No.	Road & Chowk Name	JAN-23	FEB-23	MAR-23	APR-23	MAY-23	JUNE-23	JULY-23	AUG-23	SEPT-23	OCT-23
P1	Arif Shaheed Road & Railway Crossing Road										
P2	Awa Road										
СРЗ	CP-3 Haji Pura Chowk										
P7	Western Circular Road										
P8	Bank of Nallah Palkhu Road & RailwayLine Road										
CP2	CP-2 Telephone Exchange Chowk										

## Annexure-E EIA Report

#### Instructions:

Environmental and Social Focal Persons (ESFPs) 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 of sub-projects at planning stage and will be duly signed by the relevant BSFP 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;

1			h. 5	
Name of ESFP: W	agar Ahmad.			
Name of MC: W	azirabad.			
Name of MC: W Sub-Project Sector:	Roads -			
Sub-Project Title:	Rehabili lakor o Slaughli	A Road G.	TRoad is By1	Dass Road Via
Sub- Project Categori	zation: Slaughtw	E-1	S-1	rancho ,
		E-2	S-2	
		E-3	(S-3)	

Date of Screening:

Anticipated Project Activities

Preparation of Jub-grade

Preparation of grade

Preparation of Sub-base a base st of Subprojects

Inpletion Time/Duration

62-3 months

**Estimated Cost of Subprojects** 

Tentative Completion Time/Duration

**Estimated Labor for Subproject** 

<sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting	1		<u> </u>
Is the Sub-Project area adjacent to or within any of the following	lowing	:	
Environmentally sensitive areas?		;	
Legally protected Area		/	Noi Observe
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>		/	NoI Observed 4(Nallahphalki
Estuarine		/	4
Special area for protecting biodiversity		/	4
Buffer zone of protected area		1	и
Mangroves Forest		/	Ų
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		/	crops.
Socially sensitive /important areas/communities/ people	e?		\
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 <sup>4</sup>		/	Not Observe.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project <sup>5</sup>		/	ч
Any graveyard of local community (Muslims or Christians)			i./
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 <sup>6</sup> of the society and women or children)?		/	1/
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		1	No infrasture to be impacl
B. Potential Environmental Impacts Will the Sub-Project cause			J
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		/	Dot antiapaled
2. Cutting of trees?		/	, J
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		/	и

<sup>&</sup>lt;sup>3</sup> Ibio

<sup>&</sup>lt;sup>4</sup> According to Environmental Assessment Guidelines adopted by Punjab EPA

<sup>5</sup> Ibid

<sup>&</sup>lt;sup>6</sup>due to caste, creed, religion or gender e.g. transgender

<sup>&</sup>lt;sup>7</sup>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.

4.	Generation of wastewater during construction or operation?		9
5.	Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?	/	4
6.	Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?	\	4
7.	Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?	/	И
8.	Over pumping of ground water, leading to salinization and ground subsidence?	\	No overpumping involve
9.	Serious contamination of soil due to construction works?		Nol'antiapaled
10.	Aggravation of solid waste problems in the area?	/	ч
11.	Generation of hazardous waste?	/	и
12.	Increased air pollution due to sub-project construction and operation?	/	Dusi pollulion mitigate by wali spinishing.
13.	Noise and vibration due to sub-project construction or operation?	/	work activisé can cause but impact nextigible
14.	Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?	/	Dos anticipales
15.	Use of chemicals during construction?		4
	Potential Social Impacts Il the Sub-Project cause		
1.	Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?	/	Not autrapaled
2.	Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)	/	No involvations
3.	Disproportionate impacts on the poor, women and children and or other vulnerable groups <sup>8</sup> (mentioned above)?	/	Not autrigabe
4.	Temporary impediments in movements of people/transport and animals?	/	Allivnate roule well
			,, . <del> </del>

<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

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)?	/	contractor well hing local labor
6.	Social conflicts if workers from other areas are hired?	 /	4
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	/	Nãos antiapoles
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?	/	4
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?	/	<b>\$</b>
10.	Any impact on sensitive receptors (mentioned above)	/	Ų
11.	Any impact of negative nature on already existing infrastructure including public amenities		4

A.M.O(IES) Prepared By:

Name:

Signature: Date Thi BIAMRIAD BOOK to Municipal Committee

Wazirabad

Endorsed By: DPO - ESSS.

Name: Tehmura Kivan

Signature: Tyla:

Date: 30-9-2021.

#### Instructions:

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It is to be attached with the main document<sup>2</sup> 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.

111					
Name of ESFP: Wagar Amman.					
Name of ESFP: Wagar Ahmad.  Name of MC: Wagarahad					- 46
Sub-Project Sector: Road.  Sub-Project Title: Rehablitation & Road (Museusub-Project Categorization:	0 1	1 (1	Guru Kolha	ī	Sicke
Sub-Project Title: Rehablitation	1 Kond	Jum Chowk			
Sub-Project Categorization: Koa a ( Mus u	E-I Koad	S-1			
	(E-2)	S-2			
	E-3	(S-3)	L		

Date of Screening:

30-9-2021

**Anticipated Project Activities** 

Preparation of Subgrade Preparation of Subbase Preparation of base laying of TSI Finishing works.

**Estimated Cost of Subprojects** 

Completion Time/Duration 2-3 month

Estimated Labor for Subproject 15-20

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No.	Remarks
A. Project Siting		<u> </u>	<u> </u>
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		/	
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>		/	
Estuarine		1	
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,		X	Muslim Graveyard. Mosque Tagner.
Temple, Fort, archeological/historical site) within 100 m of the proposed subproject <sup>4</sup>			Mosque lagres.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project <sup>5</sup>		/	
Any graveyard of local community (Muslims or			Muslim Gravejard.
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 <sup>6</sup> of the society and women or children)?			
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		/	No import antiapated on existing infrastructura,
B. Potential Environmental Impacts Will the Sub-Project cause			J
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		/	impail is negligible as area Sill has no birdiversity
2. Cutting of trees?			No tree culling income
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		/	Not antropaled
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?		/	"

<sup>&</sup>lt;sup>4</sup> According to Environmental Assessment Guidelines adopted by Punjab EPA

<sup>6</sup>due to caste, creed, religion or gender e.g. transgender
7Sewerage /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.

6.	Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?		V	Not autiapaled
7.	Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		1	No surfacebody found in vaccinity of project area.
8.	Over pumping of ground water, leading to salinization and ground subsidence?		1	No over pumping involved
9.	Serious contamination of soil due to construction works?		/	No anticipated
10.	Aggravation of solid waste problems in the area?	1		ynot properly managed can
11.	Generation of hazardous waste?			Not anticipated
12.	Increased air pollution due to sub-project construction and operation?	/		Construction machinery 4 Excavation can cause
13.	Noise and vibration due to sub-project construction or operation?	/		maihineny & construction Vehicle can cause
14.	Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		/	Contractor will ensure Proper management of Solid Liquid waste
15.	Use of chemicals during construction?		7.	Not use
	Potential Social Impacts Il the Sub-Project cause			
1.	Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?		/	Not observed
2.	Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		/	No involuntary resultimes
3.	Disproportionate impacts on the poor, women and children and or other vulnerable groups <sup>8</sup> (mentioned above)?		/	Noi anticipale
4.	Temporary impediments in movements of people/transport and animals?	V	X	Not high impact
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)?		/	local labor will e hired by contractor
6.	Social conflicts if workers from other areas are hired?		/	ц
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		/	Contactor wint ensure PPES 4 HSE plans

<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

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?		/	Not anticipaled
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 antrapaled
10.	Any impact on sensitive receptors (mentioned above)		/	· u
11.	Any impact of negative nature on already existing infrastructure including public amenities	·	/	,

Prepared By:

Name:

Signature:

Date: ASSISTANT MUNICIPAL OFFICER MS

Municipal Committee Wazirabad

Endorsed By: DPO- ESS 5.

Name: Tehrmine kiran.

Signature: Tyla

Date: 30-6-2021

#### Instructions:

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(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.

			<b>特种等。10 特别 1938</b> 年4月
Name of ESFP: Wagar Ahmad.  Name of MC: Wazrabad.			
		~ = *\	, , , ,
Sub-Project Sector: Koad S  Sub-Project Title: Rehablitation of R  Sub-Project Cotegorization:	oad from Cily	Park to Dh	ounted (Awa Road)
Sub- Project Categorization:	E-1	S-1	
	E-2 E-3	S-2 S-3	
Date of Screening: 30-9-2021			
Anticipated Project Activities  Preparation of 81  Preparation of 81  Estimated Cost of Sybprojects	sub-grad rade ,-base 460	e ese	

Tentative Completion Time/Duration 2-3 months

Estimated Labor for Subproject 25-30 Persons

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks			
A. Project Siting	I <u></u>					
Is the Sub-Project area adjacent to or within any of the following:						
Environmentally sensitive areas?						
Legally protected Area		1	Not observel,			
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>		/	4			
Estuarine		/	4			
Special area for protecting biodiversity		/	"			
Buffer zone of protected area		\	4			
Mangroves Forest		/	4			
Man-made forest /game reserve, orchid /crops or any other area of environmental importance			l)			
Socially sensitive /important areas/communities/ people	e?					
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 <sup>4</sup>		/	у			
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project <sup>5</sup>			h			
Any graveyard of local community (Muslims or Christians)			L <sub>1</sub>			
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 <sup>6</sup> of the society and women or children)?		/	4			
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		/	to be impact.			
B. Potential Environmental Impacts Will the Sub-Project cause			J			
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		/	Not antiapated			
2. Cutting of trees?		/	<i>U V</i>			
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		/	7			

<sup>&</sup>lt;sup>3</sup> Ibid.

According to Environmental Assessment Guidelines adopted by Punjab EPA
 Ibid.

<sup>&</sup>lt;sup>6</sup>due to caste, creed, religion or gender e.g. transgender

<sup>&</sup>lt;sup>7</sup>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.

4. Generation of wastewater during construction or operation?	/	U
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?	/	1
6. Alteration of surface water hydrology of waterways resulting in increased sediment in streams/rivers or due to increased soil erosion at construction site?	/	No Surface water Jourd
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?	/	Not antrapded
8. Over pumping of ground water, leading to salinization and ground subsidence?	/	No overfromping involve
<b>9.</b> Serious contamination of soil due to construction works?	/	Not anticepated
10. Aggravation of solid waste problems in the area?		4
11. Generation of hazardous waste?		ll .
12. Increased air pollution due to sub-project construction and operation?	/	Dust pollulur can be miligate Inrough wat si
13. Noise and vibration due to sub-project construction or operation?	/	roegheish
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		Des antiapated
15. Use of chemicals during construction?	/	4
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)?	/	
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)	/	Mo involuntary resellent involved
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups 8(mentioned above)?		Desaulicipaled Albrate sou te juil be provided
4. Temporary impediments in movements of people/transport and animals?		Alluate sou le juil

<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

		 	<del>,</del>
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)?	/	contract will ensure total labor huis
6.	Social conflicts if workers from other areas are hired?	/	ц
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	\	ppts will be used by labor
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?	/	Dal anticipabil
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?	/	4
10.	Any impact on sensitive receptors (mentioned above)	/	4
11.	Any impact of negative nature on already existing infrastructure including public amenities		

Prepared By: A.M.O(I&S),
Name: Wayar Ahmed
Signature: magginature:

ASSISTANT MUNICIPAL OFFICER 1885.

**Municipal Committee** 

Wazirabad

Tehmina Kivar DPO - ESSS Tyle, 30-9-2021

Name:

Signature:

Date:

#### 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<sup>2</sup> 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: Wagar Ahmad.
Name of MC: Wazrabad.

Sub-Project Sector: Roads

Sub-Project Title: Re haltalioi of Road from Bank of Ponjab his Sub-Project Categorization: Karlway N. 3 amabad (Arif Shaheed Road)

Sub-Project Categorization:

Date of Screening:

30-9-2021

**Anticipated Project Activities** 

Preparation of Substance Preparation of Substance Preparation of Substance Loyang of Appell.

**Estimated Cost of Subprojects** 

Completion Time/Duration

02-3 months.

Estimated Labor for Subproject

15-20 .

<sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks
A. Project Siting	$\vdash$	I	
Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		, ,	
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>			-
Estuarine		/	
Special area for protecting biodiversity		/	
Buffer zone of protected area		/	
Mangroves Forest		7	
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 <sup>4</sup>		/	
Sensitive receptors (Schools, colleges, hospitals and	}		EFA School Syslem"
clinics) within 100 meter of the proposed sub project <sup>5</sup> 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 <sup>6</sup> of the society and women or children)?		/	
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		/	
B. Potential Environmental Impacts Will the Sub-Project cause			
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		/	Not observed
2. Cutting of trees?			ķ.
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?			4
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?		/	4

<sup>3</sup> Ibid.

<sup>&</sup>lt;sup>4</sup> According to Environmental Assessment Guidelines adopted by Punjab EPA

<sup>&</sup>lt;sup>5</sup> Ibid

<sup>&</sup>lt;sup>6</sup>due to caste, creed, religion or gender e.g. transgender

<sup>&</sup>lt;sup>7</sup>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.

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?	
<b>9.</b> Serious contamination of soil due to construction works?	No hazardous chemical would be used during construction. If not manage property. Solid was cause research.
10. Aggravation of solid waste problems in the area?	if not manage property. Solid was
11. Generation of hazardous waste?	
12. Increased air pollution due to sub-project construction and operation?	is anticipate contractor will loipen EMP swilly
13. Noise and vibration due to sub-project construction or operation?	noise poilulier can be generali Contra cir will follow enip
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?	olisposal of Soid & liquid
15. Use of chemicals during construction?	
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)?	
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)	No involudant resslend
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups 8(mentioned above)?	
4. Temporary impediments in movements of people/transport and animals?	, Allwhate route is available adjacent with this road

<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

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)?		Local labor will be hind.
6.	Social conflicts if workers from other areas are hired?		at total tend.
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		
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?	<b>/</b>	
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?		
10.	Any impact on sensitive receptors (mentioned above)	/	
11.	Any impact of negative nature on already existing infrastructure including public amenities		No impact is anticipated

Prepared By:

A.M.O (I&S)

wagar Alpmed Name: Signature:

Date:

30-9-2021 ASSISTANT MODICIPAL U ...

> Municipal for an a Waziragan

Endorsed By:

Name:

DPO-ESSS.
Tehmine Kivan
Tyla:
30-a-2021.

Signature:

Date:

#### Instructions;

Environmental and Social Focal Persons (ESFPs) 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? of sub-projects at planning stage and will be duly signed by the relevant BSFP 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: Wagyar Ahmad  Name of MC: Wazirabad.		
Name of MC: Wazirabad		
Sub-Project Sector: Roads	5 10	1 km Veterniles
Sub-Project Title: Widening and Impr	covernent of Room	uny station.
Sub-Project Sector: Koads  Sub-Project Title: Widening and Impro  Sub-Project Categorization:	E-1	S-1 <sup>2</sup>
	E-2	S-2
	(E-3)	<b>(S-3</b> )
Date of Screening: 30-9-2021		
Anticipated Project Activities	Ch-aradi	e.

Estimated Cost of Subprojects

Tentative Completion Time/Duration

Uz-3 months

**Estimated Labor for Subproject** 

20-25 porson.

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> It is meant as PC-I and/or engineering estimates of sub-project

Screening Questions	Yes	No	Remarks	
A. Project Siting	<del></del>			
Is the Sub-Project area adjacent to or within any of the following	lowing	:		
Environmentally sensitive areas?		/		
Legally protected Area			Noi Observed.	
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project <sup>3</sup>		/	11	
Estuarine			4	
Special area for protecting biodiversity		/	ll .	
Buffer zone of protected area		-	U	
Mangroves Forest			4	
Man-made forest /game reserve, orchid /crops or any other area of environmental importance			U	
Socially sensitive /important areas/communities/ people	e?			
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 <sup>4</sup>		_	Not observed.	
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project <sup>5</sup>			Govt Nosral Girls School. Primary School, THQ, veli-il	чГ¬
Any graveyard of local community (Muslims or Christians)		/	4	,
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 <sup>6</sup> of the society and women or children)?		/	4	
Already existing infrastructure <sup>7</sup> (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		/	и	
B. Potential Environmental Impacts Will the Sub-Project cause				
Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?			Not anticipaled	
2. Cutting of trees?			4	
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		/	4	

<sup>3</sup> Ibio

<sup>&</sup>lt;sup>4</sup> According to Environmental Assessment Guidelines adopted by Punjab EPA

<sup>5</sup> Ibid

<sup>&</sup>lt;sup>6</sup>due to caste, creed, religion or gender e.g. transgender

<sup>&</sup>lt;sup>7</sup>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.

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<sup>&</sup>lt;sup>8</sup> Women, Children, Women headed households, People in old age, people having disabilities, socially isolated community groups and or people living below the poverty line

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)?	/	Contractor will ensure hiring y local labor
6.	Social conflicts if workers from other areas are hired?	1	4
7.	Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	/	PPEs would be used by labor
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?	/	Not autocipated
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?	/	7
10.	Any impact on sensitive receptors (mentioned above)	/	ч
11.	Any impact of negative nature on already existing infrastructure including public amenities	/	

A.M.O (145) Prepared By:

Name:

Signature:

Date: Municipal Committee Wazirabad

Endorsed By:

Name:

Signature:

Date:

DPOESSS.

Tehmina Kivan

Tyla.

30-9-2021