

LOCAL GOVERNMENT & COMMUNITY DEVELOPMENT DEPARTMENT



PUNJAB CITIES PROGRAM

**PC-I FORM
FOR
REHABILITATION OF EXISTING ROADS
WITH TUFF PAVERS IN KAMALIA (PACKAGE III)**

**ESTIMATED COST: PKR 55.57 MILLION
BASED ON MRS 2nd BIENNIAL**

NOVEMBER 2022

MUNICIPAL COMMITTEE KAMALIA

Punjab Cities Program

PC-I Form

Rehabilitation of Existing Roads with Tuff Pavers in Kamalia

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PC-I FORM

For

REHABILITATION OF EXISTING ROADS WITH TUFF PAVERS IN KAMALIA

PROJECT SERIAL NUMBER:

SECTOR: SOCIAL

SUB SECTOR: ROADS

1- Name of the Project	Punjab Cities Program (PCP) Rehabilitation of Existing Roads with Tuff Pavers in Kamalia											
2- Location	<p>Kamalia Town is located at 72°-39' East and 30°-43' North. The town is located at a distance of 65 miles from Faisalabad, 149 miles from Lahore, and 20 miles from Toba Tek Singh. The newly constructed motorway (M3 Lahore to Multan) is passing at 9 miles at the north west of this town and the access to Lahore and other main cities has been eased out.</p> <p>Location Map of the Roads in the city is attached as Annexure - A.</p>											
3- Authorities Responsible												
I- Sponsoring	Government of the Punjab (through World Bank funding)											
ii- Execution	Municipal Committee Kamalia											
iii- Operation and Maintenance	Municipal Committee Kamalia											
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	<p>PCP is a World Bank funded Program with a total cost of 236.00 million USD and comprises of below mentioned components;</p> <table border="1"> <tr> <td>Total loan from World Bank</td> <td>200.00 million USD</td> </tr> <tr> <td>Component-1 Infrastructure development (P4R)</td> <td>180.00 million USD</td> </tr> <tr> <td>Component-2 Technical Assistance</td> <td>20.00 million USD</td> </tr> <tr> <td>MCs share (20% of PforR component) equivalent to:</td> <td>36.00 million USD</td> </tr> <tr> <td>Total Program cost</td> <td>236.00 million USD</td> </tr> </table> <p>Component-2 i-e Technical Assistance component of Program costing 20.00 million USD is meant for management cost of the Program and capacity building of MCs & Government Departments and is included in the medium term/ five year plan and has been funded now in ADP 2022-23 - under General Serial No-2521 with allocation of PKR 331.91 million as foreign component for Kamalia.</p>		Total loan from World Bank	200.00 million USD	Component-1 Infrastructure development (P4R)	180.00 million USD	Component-2 Technical Assistance	20.00 million USD	MCs share (20% of PforR component) equivalent to:	36.00 million USD	Total Program cost	236.00 million USD
Total loan from World Bank	200.00 million USD											
Component-1 Infrastructure development (P4R)	180.00 million USD											
Component-2 Technical Assistance	20.00 million USD											
MCs share (20% of PforR component) equivalent to:	36.00 million USD											
Total Program cost	236.00 million USD											

<p>ii- If not included in the current plan, what warrants its inclusion and how it is now proposed to be accommodated</p>	<p>Not applicable</p>
<p>iii If the project is proposed to be financed out of block provision indicate.</p>	<p>The project is being financed by World Bank as Donor along with 20% co-financing from the Program MCs and is not proposed to be financed out of Block Allocation.</p>
<p>4b- Provision in the current year PSDP/ADP</p>	<p>PKR 331.91 million under ADP 2022-23 General Serial No 2521 for Component-2 of the Program i-e Technical Assistance as described above.</p>
<p>5. Project objectives and its relationship with sector objectives</p>	<p><u>Sector Objectives</u></p> <p>The sector objectives include:</p> <ol style="list-style-type: none"> i. Provision of efficient and effective municipality services to the masses. ii. Community development through improving basic infrastructure. iii. Clean environment for better living standards. iv. Ease in mobility and communication. v. Capacity building of Local Governments. <p><u>Objectives of the Project</u></p> <p>The main objective of project is to improve the damaged condition of existing roads / streets leading to enhanced quality of life of inhabitants of the area, safety for pedestrians and smooth traffic movement.</p> <p>The Project has the following objectives;</p> <ol style="list-style-type: none"> i. Improvement of service delivery level of the municipal services in the sector of communication. ii. Better travelling facilities for the commuters. iii. Reduction in road accidents. iv. Saving in travelling and repair cost of the vehicles. v. Reduction in annual maintenance charges of roads. vi. Improvement in environment of the city making it livable. vii. Improvement in local and province economy. viii. Improvement in the economic growth potential of the city. <p>Hence, the objectives of the project are in line with the sector objectives mentioned at Sr. No-1, 2, 3 and 4 above and the project forms integral part of the concerned sector.</p>

6- Description, justification, technical parameters, and technology transfer aspects:	
i)Description	Municipal Committee Kamalia is headquartering of Kamalia tehsil one of the four tehsils of Toba Tek Singh District in Punjab Province. Its population as per census 2017 is 148,163 persons within MC boundary notified in 2019 and is expected to be 197,073 persons in the years 2032.
ii)Justification	<p>There are a lot of areas of Kamalia city where tuff tiles have been laid in past years. Due to various activities for installation of utilities in these areas the condition of the areas, highlighted by MC, Kamalia has been deteriorated and need immediate attention to improve the vehicles traffics and pedestrian movement to ease out the public at large in the area. The same shall also enhance the quality of life and improve area environment as well.</p> <p>Presently, the streets taken in the project are in miserable condition and show problems regarding surface riding quality, surface drainage and aesthetics. The reconnaissance and detailed surveys carried out identified the poor condition of existing infrastructure quality. About 2 Nos. of streets were surveyed and the typical x-sections were developed for different width of road and pavement design. The widths of streets vary from 10' to 12' for which x-sections have been developed for clients' approval.</p>
iii)Technical Parameters	<p>Technical parameters for laying of tuff pavers include the following;</p> <ul style="list-style-type: none"> • Base & Sub Base • Sand bedding 2" to 3". • Tuff Pavers of approved quality 80mm thick (with strength 7000 Psi).
iv) Detail of civil works, equipment & machinery, and other physical facilities	Factory manufactural concrete pavers of specified strength, sand, graders, and compactors will be involved.
v) Indicate governess issues of the sector relevant to the project and strategy to resolve them	<ul style="list-style-type: none"> • The smooth sailing of the Punjab Cities Program (PCP) can only be assured when the required staff for maintenance is available with MC Kamalia. • The repair and maintenance of the municipal services seem to be not up to the mark in the MC. Trainings will be imparted by PMDFC to the officers as well as the field staff under PCP but practicing the interventions and methods/ procedures learnt in these trainings is the actual requirement in which MCs are lacking at present. The same are to be given due considerate for improving the delivery level.

7- Capital Cost of Project

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

Sr. No.	Description	Total Cost (PKR)
1	Providing and Laying Tuff Paver	51,230,681
	Total Cost	51,230,681
	Contingencies @ 2%	1,024,613
	Punjab Sales Tax @ 5%	2,561,534
	E&S Mitigation Estimated Cost	750,000
	Total Cost PKR	55,566,829
	PKR Million	55.57

Detail of Cost Estimate are given in **Annexure-B**.

i- Indicate date of estimation of the project cost

The project estimates have been framed during the month of October, 2022.

ii- Basis of determining the estimates be provided.

The cost estimates have been framed based on bill of quantities measured at site and unit rates from the Market Rate System (MRS) issued by the Government of Punjab (District Toba Tek Singh 2nd 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:

Sr. No.	Name of Road	Year 2022-23
1	Providing and Laying Tuff Paver	100%
2	Contingencies, taxes and other items	100%

iv- Phasing of capital cost based on each item of work.

The phasing of capital cost of the project is included in the following table: (All figures are in rupees unless shown otherwise).

Sr. No.	Description	Total Cost (PKR)	Total Cost (PKR)
1	Providing and Laying Tuff Tiles	51,230,681	51,230,681
	Total cost	51,230,681	51,230,681
	Contingencies @ 2%	1,024,613	1,024,613
	Punjab Sales Tax @ 5%	2,561,534	2,561,534
	E&S Mitigation Estimated Cost	750,000	750,000
	Grand Total	55,566,829	55,566,829
	Say Rs (Million)	55.57	55.57

<p>8- Annual recurrent cost after completion of the project and source of financing</p>	<p>The roads/ streets are already being repaired and maintained by Municipal Committee Kamalia out of its own financial resources. No additional cost will be required after completion of the improvement and upgradation of the roads, rather the repair 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.</p>
<p>9- Demand & Supply Analysis</p> <p>i- Existing Capacity of services</p> <p>ii- Projected Demand for 10 years</p> <p>iii- Capacity of other similar projects being implemented in public/private sector</p> <p>iv- Supply and Demand gaps</p> <p>v- Designed capacity and output of the project</p>	<p>B. Existing supply level</p> <p>The streets are in much deteriorated condition which are hampering the mobility of inhabitants of the areas.</p> <p>Laying of Tuff pavers in 2 streets (R1-Haji Chowk to Pakistan Chowk via Durbar Pirshah Road, Sajjad Zargar House Bank Road Link Street Saran Dorgan Wali City Kamalia, R2-Daras Gohousia Durbar Dargahi Shah via Malikan wali Bheni Main Gate Fazil Dewan Park City Kamalia) of Kamalia City to meet future population requirement of local area up to the year 2032.</p> <p>No other project of similar nature is being executed in the city at present.</p> <p>Existing roads are not well enough to sustain the smooth traffic flow. Existing pavement structure of the roads is deteriorated which needs the rehabilitation to bear the traffic loading.</p> <p>Municipal Committee Kamalia 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 lab our 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.</p> <p>Two streets serving different residential areas in which are situated shall be designed for about ten year's life with minimum O&M cost. The length and area served shall be 6558 Rft and 104928 Sft respectively.</p>

10. Financial Plan

Debt

a) Indicate the local and foreign debt Loan

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

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

This Project will be funded under this financing.

b) Equity

A. Loan / grant to MC

The amount of loan converted to grant to MC Kamalia will be PKR 55.57 million (cost of the PC-I). The financing of the project will be as given below:

Grant to M for the year 2022-23 (80% of cost of PC-I) worked out	PKR 44.456 million
20% Co-finance by MC (20% of the cost of PC-I) worked out	PKR 11.114 million
Total available funds (Total cost of PC-I) worked out	PKR 55.57million

B. Project Cost 55.57 million PKR

The loan is from World Bank to Government of Pakistan/Punjab which will trickle down to MC Kamalia as grant.

c) Grants

No grant is being given by Government of Punjab out of ADP funds. The World Bank loan to Government of Pakistan/Punjab will trickle down as grant to MC from Government of Punjab.

d) Weighted cost of capital

Nil

11-Project Benefits and Analysis

i. Financial:

Income to the project with assumption

(Attached Economic Analysis, Cost benefit ratio and Sensitivity Analysis as **Annexure-C**)

ii. Social benefits to the target group

(Attached at Annexure-E)

iii. Environmental Impact negative/positive

(Attached at Annexure-E)

iv. Quantifiable project outputs

(Attached at Annexure-C)

v. Unit cost analysis

Unit cost of construction shall be **PKR 530 Per Sft**

vi. Employment generation
(direct and indirect)

Direct Employment

i. Planning and Design of projects

The planning and design of the project has been entrusted to local Consultant who has appointed staff and experts in road and related disciplines along with their support staff. The Consultant will also appoint their staff for resident supervision of the Project.

ii. Execution of the Project

a) PMDFC

PMDFC has the project monitoring and supervisory role and the company has enough experts and staff to complete this assignment. PMDFC has already deployed under mentioned staff for these projects:

- Civil Engineers / Architects
- Accounts, administration, and audit personnel
- Urban planners
- GIS experts
- Support staff like computer operators, vehicle drivers, office boys and guards.
- Procurement experts
- Communication experts
- Environmental and social experts
- Contract management experts

b) Consultant

PMDFC has employed consultant for detailed design and resident supervision of the project who will deploy this staff for execution of the project.

c) Municipality

MC Kamalia 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 executing the project will employ technical staff, technicians, and skilled / un-skilled lab our on this work.

Indirect Employment

Indirect employment for production of material such as cement, steel, aggregates, stone, metal, bitumen, bricks etc. will be generated.

vii. Impacts of delays on
project cost and
viability

The impact of delay in project implementation will;

- Result in increased project cost due to escalation in cost of material and lab ours.
- Delay the benefits to the target group
- Result in further deterioration of the infrastructure and the service delivery level.

12-Implementation Schedule

a) Indicate starting and completion date of the project

The project is anticipated to commence by December 2022 and to be completed by the end (June 2023) of financial year 2022-2023.

b) Item wise/year wise schedule in line chart

Gantt Chart is attached as Annexure - D.

13- Management Structure and manpower requirements

i- administrative arrangements for the implementation of the project

Execution of the Project

- The project will be executed by MC Kamalia and supervised by the Consultant 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 MC 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 the MC.
- The procurement of works and goods will be done by Procurement Committee of MC Kamalia as per PPRA Rules.

ii- The manpower requirements by skills during execution and operation of the project and,

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.

The job description, qualification, experience, age and salary of each post

b) Resident Supervision Consultants

The project will be supervised by the consultant. The tentative staff to be employed/deployed by the consultants for the certification of quantities of works and resident supervision of the Projects in each city including this project is given below.

S #	Personnel	No.	Qualification
1	Chief Resident Engineer/Team Leader	01	BSc/BE in Civil engineering with minimum 20 years' professional experience 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 in both cases
2	Senior Engineer	01	BSc/BE Civil engineering with minimum 08 years' relevant design experience or MSc engineering, with 5 years on similar assignments in both cases
3	Resident Engineer	01	BSc /BE Civil engineering with minimum 10 years' experience in site supervision and execution for projects of similar nature.

S #	Personnel	No.	Qualification
4	Assistant Resident Engineer	01	Bachelor Degree in Civil engineering with minimum 8 years' experience in site supervision and execution for projects of similar nature
5	Site Inspectors	01	DAE in Civil with minimum 10 years' experience in site supervision for projects of similar nature
6	Quantity Surveyor	01	DAE in Civil Technology with minimum 10 years' experience in estimation & costing of projects of similar nature. The person having public sector projects will be preferred.
7	AutoCAD Operator	01	DAE in Civil Technology with minimum 5 years' experience in preparation of drawings for projects of similar nature. (Situating at Lahore office)

c) Contractor's Technical Staff, and Skilled / Un skilled lab our:

The contractors will employ the supervisory technical staff and skilled / un skilled lab our for execution of the works. The works will be supervised by experienced Engineers, and sub engineers and the number of slots for engineers and skilled and un skilled will depend upon the type and quantity of work and its period of completion.

d) Repair & Maintenance of the Project:

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

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

14-Additional projects /decisions required to optimize the investment being undertaken

1) Shortage & frequent transfers of Provincially appointed Staff

The MC is facing shortage in provincially appointed and locally appointed cadres. This will seriously affect the pace of progress of the program and the implementation of the infrastructure projects may be delayed. Provincial Government should fill up the vacant staff immediately for optimizing the investments in the MC.

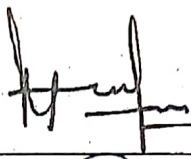


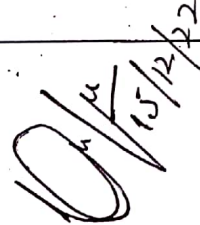
2) Repair & Maintenance (R&M) Staff

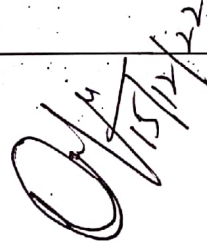
The R&M staff is also deficient and this is adversely affecting the service delivery level. Number of slots are vacant but the MC is not allowed to recruit the persons to fill these slots due to ban on recruitments.

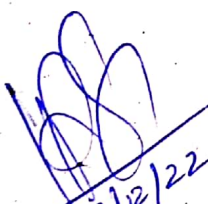
Further the sanctioned strength of the field staff is much lesser than the actual requirement because with the increase in population and extension of services, additionally required staff has not been sanctioned by the competent authorities.


Both above issues need to be addressed for optimal utilization of the investments and giving targeted benefits to the resident population of PCP 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 Local Government and Community Development Department.

Prepared by:	MM Pakistan (Pvt) Ltd	Stamp & Signatures	 
Checked by:	Municipal Officer (Infrastructure) Municipal Committee Kamalia	Stamp & Signatures	
	Chief Officer District Municipal Committee Kamalia	Stamp & Signatures	
Forwarded by:	Administrator Municipal Committee Kamalia	Stamp & Signatures	

Administrator Municipal Committee Kamalia	Signatures	
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13/12/22
QS-ID

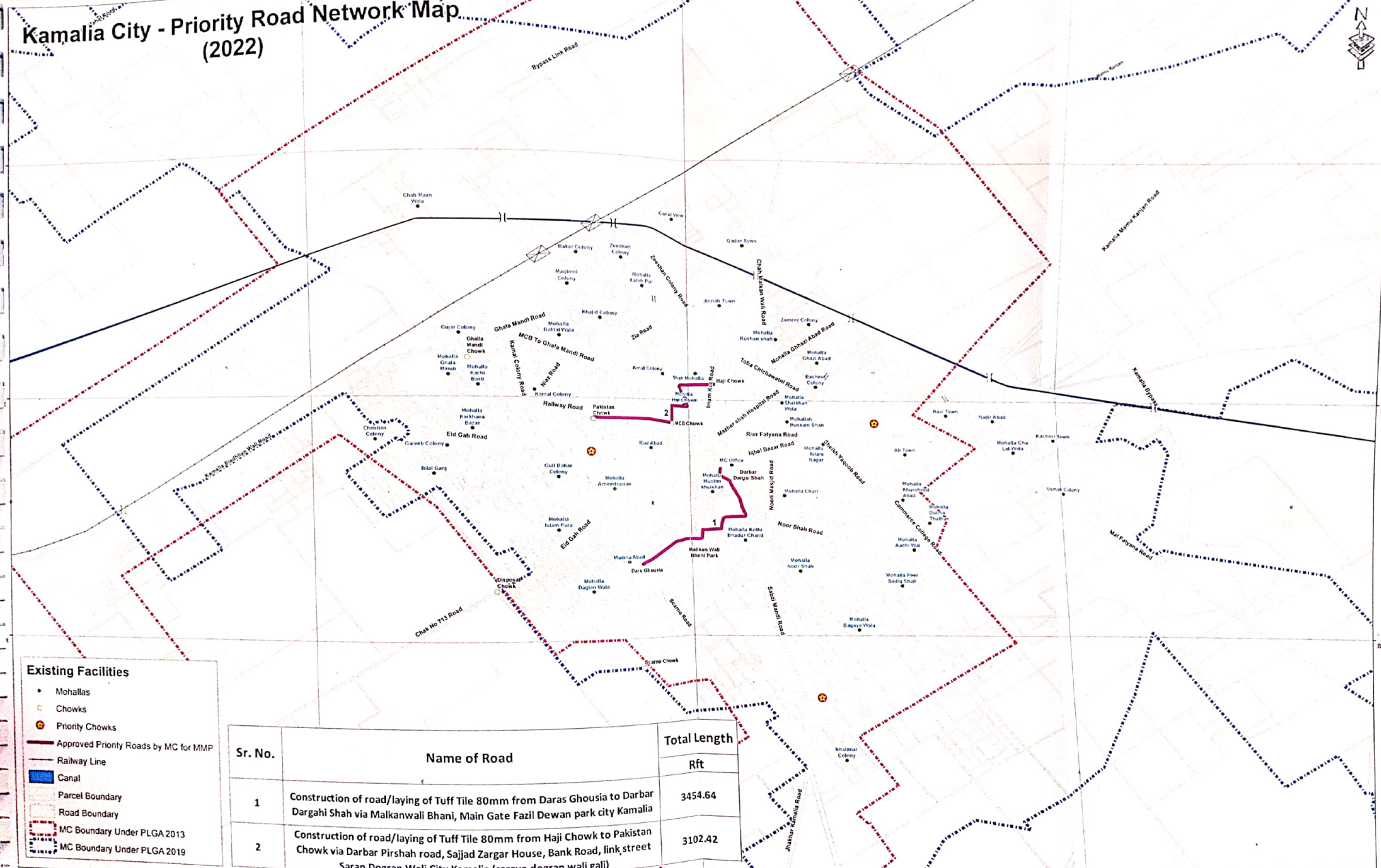

Program Officer-1
Infrastructure Development
Punjab Cities Program-Lahore

ANNEXURES

ANNEXURE – A

Location Map

Kamalia City - Priority Road Network Map (2022)



Existing Facilities

- Mohallas
- Chowks
- Priority Chowks
- Approved Priority Roads by MC for MMP
- Railway Line
- Canal
- Parcel Boundary
- Road Boundary
- MC Boundary Under PLGA 2013
- MC Boundary Under PLGA 2019

Sr. No.	Name of Road	Total Length
		Rft
1	Construction of road/laying of Tuff Tile 80mm from Daras Ghausia to Darbar Dargahi Shah via Malkanwali Bhani, Main Gate Fazil Dewan park city Kamalia	3454.64
2	Construction of road/laying of Tuff Tile 80mm from Haji Chowk to Pakistan Chowk via Darbar Pirshah road, Sajjad Zargar House, Bank Road, link street Saran Dogran Wali City Kamalia (saraye dogran wali gali)	3102.42

PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY

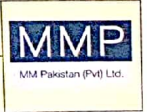
PROJECT:
PUNJAB CITIES PROGRAM (PCP)

Map Code
0310020822
Map Version
1.0

DISCLAIMER:
INFORMATION PRESENTED IN THE MAP BASED ON DATA PROVIDED BY MC, PHED & OTHER SOURCES.

Scale:
1:10,000
0 125 250 500 Meters

Date
September 2022



ANNEXURE – B

Cost Estimates

PUNJAB CITIES PROGRAM (PCP)
 Detailed Design of Infrastructure Sub-Projects, Sectoral Planning and Resident
 Supervision in 16 - Cities of Punjab

**REHABILITATION & CONSTRUCTION OF EXISTING ROADS WITH TUFF PAVERS IN
 KAMALIA CITY**

SUMMARY OF COST

Sr. No.	Detail of Item	Amount
R1	HAJI CHOWK TO PAKISTAN CHOWK VIA DARBAR PIRSHAH ROAD SAJJAD ZARGAR HOUSE BANK ROAD	24,247,183 ✓
R2	DARAS GHOUSIA TO DARBAR DARGAHI SHAH VIA MALKANWALI BHANI, MAIN GATE FAZIL DWAN PARK CITY	26,983,498 ✓
	Total Cost in (Rs)	51,230,681 ✓
	Add 2% Contingency	1,024,613.62 ✓
	Add 5% PST	2,561,534.05 ✓
	ESMP Implementation Estimated Budget (Annex- B1)	750,000 ✓
	Grand Total in (Rs)	55,566,829 ✓
	Grand Total in (Million)	55.57 ✓

[Handwritten Signature]
S/E

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Estimate Technically vetted.

[Handwritten Signature]
 Chief Engineer (North)
 Punjab Local Govt Board
 L.G. & C. D Deptt.
 LAHORE

[Handwritten Signature]
D.M.

PUNJAB CITIES PROGRAM (PCP)
Detailed Design of Infrastructure Sub-Projects, Sectoral Planning and Resident Supervision in 16 -
Cities of Punjab
REHABILITATION & CONSTRUCTION OF EXISTING ROADS WITH TUFF PAVERS IN KAMALIA
DETAILED COST ESTIMATE

Sr.No.	Detail of Item	Unit	Quantity	Rate	Amount
R-1	HAJI CHOWK TO PAKISTAN CHOWK VIA DARBAR PIRSHAH ROAD SAJJAD ZARGAR HOUSE BANK ROAD (STA 0+000 TO STA 3+102.4151) LENGTH = 3102.42 Rft CARRIAGEWAY = 12 Ft SIDE WALK (BOTH SIDES) = 6 Ft (Avg.)				
1	Scarifying old road surface including removal of debris within 1 chain (30 m).				
	1 x 265 x 6 x - = 1590 Sft				
	1 x 95 x 9 x - = 855 Sft				
	1 x 325 x 4 x - = 1300 Sft				
	1 x 90 x 9 x - = 810 Sft				
	1 x 236 x 7 x - = 1652 Sft				
	Total Qty 6207 Sft				
	chapter no - 18 / item no - 11	100 Sft	6207	423.30	26,274
2	Regular excavation dressed. Side Walk Avg.				
	2 x 3102 x 6 x 0.83 = 30900 Cft				
	Sewerage Line Trench				
	1 x 2900 x 4 x 0.83 = 9628 Cft				
	Total Qty 40528 Cft				
	chapter no - 3 / item no - 6	1000 Cft	40528	5241.45	212,426
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.				
	Avg.				
	2 x 3102 x 6 x 0.5 = 18615 Cft				
	1 x 2900 x 4 x 0.5 = 5800 Cft				
	Total Qty 24415 Cft				
	chapter no - 3 / item no - 25 i	1000 Cft	24415	1783.25	43,537
4	c) Dismantling cement concrete 1:2:4 plain. Manhole Neck				
	31 x 9.023 x 0.75 x 0.50				
	chapter no - 4 / item no - 19c	100 Cft	104.89	11,174.60	11,721

PUNJAB CITIES PROGRAM (PCP)
Detailed Design of Infrastructure Sub-Projects, Sectoral Planning and Resident Supervision in 16 -
Cities of Punjab
REHABILITATION & CONSTRUCTION OF EXISTING ROADS WITH TUFF PAVERS IN KAMALIA
DETAILED COST ESTIMATE

Sr.No.	Detail of Item	Unit	Quantity	Rate	Amount
5	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3				
	31 x 9.023 x 0.75 x 0.50				
	chapter no - 7 / item no - 7i	100 Cft	104.89	32,796.10	34,400
6	Extra for pacca brick work in steining of wells or any other circular masonry.				
	chapter no - 7 / item no - 10	100 Cft	104.89	2,683.20	2,814
7	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick				
	31 x 9.023 x 1.00				
	chapter no - 11 / item no - 8b	100 Sft	279.71	3,424.50	9,579
8	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4				
	31 x 9.023 x 0.75 x 0.50				
	chapter no - 6 / item no - 5f	100 Cft	104.89	38,178.90	40,046
9	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.	100 Cft	92.30	11,279.50	10,411
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)	Nos	16.00	10,065.00	161,040
11	Providing and laying base course of crushed stone aggregate of approved quality and grade, and supply and spreading of stone screening, including placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100%maximum modified AASHO dry density, including carriage of all materials to site of work except gravel and aggregate.				
	1 x 3102 x 12 x 0.5 = 18614.5 Cft				
	2 x 3102 x 6 x 0.25 = 9307.26 Cft				
	Total Qty 27922 Cft				

PUNJAB CITIES PROGRAM (PCP)

Detailed Design of Infrastructure Sub-Projects, Sectoral Planning and Resident Supervision in 16 - Cities of Punjab

**REHABILITATION & CONSTRUCTION OF EXISTING ROADS WITH TUFF PAVERS IN KAMALIA
DETAILED COST ESTIMATE**

Sr.No.	Detail of Item	Unit	Quantity	Rate	Amount
	chapter no - 18 / item no - 4a	100 Cft	27922	27537.39	7,688,929
12	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				
	1 x 3102 x 24 x - = 74458.1 Sft				
	Total Qty 74458 Sft				
	chapter no - 10 / item no - 41 c	Per Sft	74458	194.90	14,511,880
13	Edge Stone (As per approved manufacturer) at site 300mm x 150mm x 50mm				
	2 x 3102 x - x - = 6204.84 Rft				
	chapter no - 6 / item no - 52 b (ii)	Per Rft	6204.84	240.8	1,494,125
Total Cost of R1					24,247,183
R-2	DARAS GHOSIA TO DARBAR DARGAHI SHAH VIA MALKANWALI BHANI, MAIN GATE FAZIL DWAN PARK CITY				
	(STA 0+000 TO STA 3+454.64)				
	LENGTH = 3454.64 Rft				
	CARRIAGEWAY = 12 Ft				
	SIDE WALK (BOTH SIDES) = 6 Ft (Avg.)				
1	Scarifying old road surface including removal of debris within 1 chain (30 m).				
	1 x 125 x 9 x - = 1125 Sft				
	1 x 119 x 8 x - = 952 Sft				
	1 x 110 x 9 x - = 990 Sft				
	1 x 136 x 6 x - = 816 Sft				
	1 x 236 x 7 x - = 1652 Sft				
	Total Qty 5535 Sft				
	chapter no - 18 / item no - 11	100 Sft	5535	423.30	23,430
2	Regular excavation dressed.				
	Side Walk				
	Avg.				
	2 x 3455 x 6 x 0.83 = 34408 Cft				
	Sewerage Line Trench				
	1 x 3200 x 4 x 0.83 = 10624 Cft				
	Total Qty 45032 Cft				
	chapter no - 3 / item no - 6	1000 Cft	45032	5241.45	236,034

PUNJAB CITIES PROGRAM (PCP)

Detailed Design of Infrastructure Sub-Projects, Sectoral Planning and Resident Supervision in 16 - Cities of Punjab

**REHABILITATION & CONSTRUCTION OF EXISTING ROADS WITH TUFF PAVERS IN KAMALIA
DETAILED COST ESTIMATE**

Sr.No.	Detail of Item	Unit	Quantity	Rate	Amount
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.				
	Avg.				
	2 x 3455 x 6 x 0.5 = 20728 Cft				
	1 x 3200 x 4 x 0.5 = 6400 Cft				
	Total Qty 27128 Cft				
	chapter no - 3 / item no - 25 i	1000 Cft	27128	1783.25	48,376
4	c) Dismantling cement concrete 1:2:4 plain. Manhole Neck				
	34 x 9.023 x 0.75 x 0.50				
	chapter no - 4 / item no - 19c	100 Cft	115.04	11,174.60	12,855
5	Pacca brick work other than building upto 10ft. (3 m) Cement, sand mortar:- Ratio 1:3				
	34 x 9.023 x 0.75 x 0.50				
	chapter no - 7 / item no - 7i	100 Cft	115.04	32,796.10	37,729
6	Extra for pacca brick work in steining of wells or any other circular masonry.				
	chapter no - 7 / item no - 10	100 Cft	115.04	2,683.20	3,087
7	Cement plaster 1:3 upto 20' (6.00 m) height:- b) ½" (13 mm) thick				
	34 x 9.023 x 1.00				
	chapter no - 11 / item no - 8b	100 Sft	306.77	3,424.50	10,505
8	Cement concrete plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate): (f) Ratio 1: 2: 4				
	34 x 9.023 x 0.75 x 0.50				
	chapter no - 6 / item no - 5f	100 Cft	115.04	38,178.90	43,921
9	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.	100 Cft	101.24	11,279.50	11,419

PUNJAB CITIES PROGRAM (PCP)
Detailed Design of Infrastructure Sub-Projects, Sectoral Planning and Resident Supervision in 16 -
Cities of Punjab

REHABILITATION & CONSTRUCTION OF EXISTING ROADS WITH TUFF PAVERS IN KAMALIA
DETAILED COST ESTIMATE

Sr.No.	Detail of Item	Unit	Quantity	Rate	Amount
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)	Nos	17.00	10,065.00	171,105
11	Providing and laying base course of crushed stone aggregate of approved quality and grade, and supply and spreading of stone screening, including placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHO dry density, including carriage of all materials to site of work except gravel and aggregate.				
	1 x 3455 x 12 x 0.5 = 20727.8 Cft				
	2 x 3455 x 6 x 0.25 = 10363.9 Cft				
	Total Qty 31092 Cft				
	chapter no - 18 / item no - 4a	100 Cft	31092	27537.39	8,561,859
12	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				
	1 x 3455 x 24 x - = 82911.4 Sft				
	Total Qty 82911 Sft				
	chapter no - 10 / item no - 41 c	Per Sft	82911	194.90	16,159,424
13	Edge Stone (As per approved manufacturer) at site 300mm x 150mm x 50mm				
	2 x 3455 x - x - = 6909.28 Rft				
	chapter no - 6 / item no - 52 b (ii)	Per Rft	6909.28	240.8	1,663,755
Total Cost of R2					26,983,498

**PUNJAB CITIES PROGRAM (PCP)
TUFF PAVER ROADS IN KAMALIA
RATE ANALYSIS FOR BASE COURSE**

ITEM	DETAIL OF QUANTITY	UNIT	QUANTITY	RATE	AMOUNT
A	Material				
	Providing and laying base course of crushed stone aggregate of approved quality and grade, and supply and spreading of stone screening, including placing, mixing, spreading and compaction of base course material to required depth, camber and grade to achieve 100% maximum modified AASHO dry density, including carriage of all materials to site of work except gravel and aggregate.				
	Chapter No - 18 / Item no - 4 a	100 Cft	100	13,776.40	13,776.40
B	Carraige				
	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.				
	Chapter No - 1 / Item no - 1				
	1st Km	100 Cft	1.22	299.40	365.27
	2nd Km	100 Cft	1.22	145.25	177.21
	3rd Km	100 Cft	1.22	116.85	142.56
	4th Km	100 Cft	1.22	85.30	104.07
	5th Km	100 Cft	1.22	80.20	97.84
	6th Km	100 Cft	1.22	79.00	96.38
	7th Km	100 Cft	1.22	74.25	90.59
	8th Km	100 Cft	1.22	73.50	89.67
	9th Km	100 Cft	1.22	69.55	84.85
	10th Km	100 Cft	1.22	65.70	80.15
	10th Km to 188th Km / 188 - 10 = 178th Km	100 Cft	1.22	57.25	12,432.41
				Total Cost of 100 Cft	27,537.39

**PUNJAB CITIES PROGRAM (PCP)
WIDENENG AND IMPROVEMENT OF EXISTING ROAD'S IN JHELUM**

RATE ANALYSIS FOR RELAYING OF BRICK BALLAST

ITEM	DETAIL OF QUANTITY	UNIT	QUANTITY	RATE	AMOUNT
	Relaying, watering and ramming of existing road brick edging mixed with 25% sand, for floor foundation, complete in all respects.				
A	Breaking brick ballast Chapter No - 6 / Item no - 43 a+b / 2 (3174.60 + 3555.55 / 2 = 3463.58)	100 Cft	-	3365.08	3365.08
B	Laying of brick ballast (labour rate only) Chapter No - 10 / Item no - 3 (Labour Rate only)	100 Cft	-	4064.40	4,064.40
C	Sand @ 25% of Material Rate Chapter No - 10 / Item no - 3 (material rate 25%)	100 Cft	-	2291.10	2,291.10
Total Cost of 100 Cft					9,720.58

PUNJAB CITIES PROGRAM (PCP)
TUFF PAVER ROADS IN KAMALIA
RATE ANALYSIS FOR EDGE STONE

ITEM	DETAIL OF QUANTITY	UNIT	QUANTITY	RATE	AMOUNT
A	Material Edge Stone (As per approved manufacturer) at site 300mm x 150mm x 50mm Input Rate No - 11 Rs=43 Each $2 \times 43 = 86 / 0.5 = 172$ (0.5 Rft Each Edge Stone)	1 Rft	1	172.00	172.00
B	Labour Cost $2 \times 43 = 86 / 0.5 = 172$ (0.5 Rft Each Edge Stone) $172 \times 0.2 = 34.4$	1 Rft	1	34.40	34.40
C	Overheads $2 \times 43 = 86 / 0.5 = 172$ (0.5 Rft Each Edge Stone) $172 \times 0.2 = 34.4$	1 Rft	1	34.40	34.40
Total Cost of 1 Rft					240.80

PUNJAB CITIES PROGRAM (PCP)
WIDENENG AND IMPROVEMENT OF EXISTING ROAD'S IN JHELUM
RATE ANALYSIS FOR RELAYING OF BRICK BALLAST

ITEM	DETAIL OF QUANTITY	UNIT	QUANTITY	RATE	AMOUNT
	Relaying, watering and ramming of existing road brick edging mixed with 25% sand, for floor foundation, complete in all respects.				
A	Breaking brick ballast Chapter No - 6 / Item no - 43 $a+b / 2$ $(3174.60 + 3555.55 / 2 = 3463.58)$	100 Cft	-	3365.08	3365.08
B	Laying of brick ballast (labour rate only) Chapter No - 10 / Item no - 3 (Labour Rate only)	100 Cft	-	4064.40	4,064.40
C	Sand @ 25% of Material Rate				

Chapter No - 10 / Item no - 3 (material rate 25%)	100 Cft	-	2291.10	2,291.10
			Total Cost of 100 Cft	9,720.58

PUNJAB CITIES PROGRAM (PCP)
TUFF PAVER ROADS IN KAMALIA
RATE ANALYSIS FOR LEAD

ITEM	DETAIL OF QUANTITY	UNIT	QUANTITY	RATE	AMOUNT
A	Carraige				
	Carriage of 100 Cft. (2.83 cu.m) of all materials like stone aggregate, spawl, kankar lime (unslaked), surkhi, etc. or 150 Cft. (4.25 cu.m) of timber, by truck or by any other means owned by the contractor.				
	Chapter No - 1 / Item no - 1				
	1st Km	100 Cft	1	299.40	299.40
	2nd Km	100 Cft	1	145.25	145.25
	3rd Km	100 Cft	1	116.85	116.85
	4th Km	100 Cft	1	85.30	85.30
	5th Km	100 Cft	1	80.20	80.20
	6th Km	100 Cft	1	79.00	79.00
	7th Km	100 Cft	1	74.25	74.25
	8th Km	100 Cft	1	73.50	73.50
	9th Km	100 Cft	1	69.55	69.55
	10th Km	100 Cft	1	65.70	65.70
	10th Km to 188th Km / $188 - 10 = 178$ Km	100 Cft	1	57.25	10,190.50
				Total Cost of 100 Cft	11,279.50

PUNJAB CITIES PROGRAM (PCP)
WIDENENG AND IMPROVEMENT OF EXISTING ROAD'S IN JHELUM
RATE ANALYSIS FOR RELAYING OF BRICK BALLAST

ITEM	DETAIL OF QUANTITY	UNIT	QUANTITY	RATE	AMOUNT
	Relaying, watering and ramming of existing road brick edging mixed with 25% sand, for floor foundation, complete in all respects.				
A	Breaking brick ballast				
	Chapter No - 6 / Item no - 43 a+b / $2 (3174.60 + 3555.55 / 2 = 3463.58)$	100 Cft	-	3365.08	3365.08

B	Laying of brick ballast (labour rate only) Chapter No - 10 / Item no - 3 (Labour Rate only)	100	Cft	-	4064.40	4,064.40
C	Sand @ 25% of Material Rate Chapter No - 10 / Item no - 3 (material rate 25%)	100	Cft	-	2291.10	2,291.10
Total Cost of 100 Cft						9,720.58

PUNJAB CITIES PROGRAM (PCP)
TUFF PAVER ROADS IN KAMALIA
RATE ANALYSIS FOR EDGE STONE

ITEM	DETAIL OF QUANTITY	UNIT	QUANTITY	RATE	AMOUNT
A	Material				
	RPC Manhole Cover	1 No	1	7,000	7,000.00
	Carriage	1 No	1	700.00	700.00
B	Labour Cost				
	LB-024 Skilled Cooly	1 Nos	0.5	1,250.00	625.00
	Sundaries (10 %)	10%			62.50
	Total				8,387.50
C	Contractor Profit	20%			1,677.50
Total Cost of 1 Rft					10,065.00

PUNJAB CITIES PROGRAM (PCP)
WIDENENG AND IMPROVEMENT OF EXISTING ROAD'S IN JHELMUM
RATE ANALYSIS FOR RELAYING OF BRICK BALLAST



ITEM	DETAIL OF QUANTITY	UNIT	QUANTITY	RATE	AMOUNT
	Relaying, watering and ramming of existing road brick edging mixed with 25% sand, for floor foundation, complete in all respects.				
A	Breaking brick ballast				
	Chapter No - 6 / Item no - 43 a+b / 2 (3174.60 + 3555.55 / 2 = 3463.58)	100 Cft	-	3365.08	3365.08
B	Laying of brick ballast (labour rate only)				
	Chapter No - 10 / Item no - 3 (Labour Rate only)	100 Cft	-	4064.40	4,064.40
C	Sand @ 25% of Material Rate				
	Chapter No - 10 / Item no - 3 (material rate 25%)	100 Cft	-	2291.10	2,291.10
Total Cost of 100 Cft					9,720.58

ANNEXURE – C

**Economic Analysis, Sensitivity
Analysis & Cost Benefit Ratio**

REHABILITATION OF EXISTING ROADS WITH TUFF PAVERS IN KAMALIA (PACKAGE III)

Project Implementation Period Chart

Sr. No.	Activity	2022		2023
		Nov-22	Dec-22	Jan-23
1	Scarifying of Existing Road			
2	Laying of Tuff Tiles			

ANNEXURE – D

Implementation Period (Gant Chart)

Punjab Cities Program (PCP)

Rehabilitation & Construction of Existing Roads with Tuff Pavers in Kamalia City

Road Project Benefits and Analysis

Construction, raising, widening, improving, surfacing / flooring and enhancing roads and road networks of any country are the backbone of social and economic development, enabling the provision of transport and logistics services to passengers & cargo and providing accessibility, which in turn induces mobility.

This project will address the following gaps in the road sector of Kamalia:-

- Limited access to road infrastructure
- Low quality / poor infrastructure
- High transportation cost

1. Project Economic and Financial Analysis

Economic analyses compare the benefits and costs and return to the economy as a whole. While, the financial analyses of the project compare direct benefits/revenues, costs and return to the individual investor / enterprise OR operating authority.

1.1. Economics

Effective and efficient road network provides economic benefits that result in multiplier effects such as providing infrastructure results in improving (physical) accessibility that will enhance mobility of people and goods, resulting in improving overall economic welfare. The existing roads in the project area are generally in very poor condition People of the city are set to benefit from the proposed provision and Laying of Tuff Pavers for the following two existing roads in Kamalia City.

SR.NO.	ROAD NAMES	ROAD LENGTH
1	HAJI CHOWK TO PAKISTAN CHOWK VIA DARBAR PIRSHAH ROAD SAJJAD ZARGAR HOUSE BANK ROAD	3102.42 ft (0.95 km)
2	DARAS GHOSIA TO DARBAR DARGAHI SHAH VIA MALKANWALI BHANI, MAIN GATE FAZIL DWAN PARK CITY	3454.64 ft (1.05 km)

Traffic on this road is light city traffic. With the completion of proposed works, a large number of people of the city would be benefitted.

1.1.1. Project Economic Costs

Financial (market) estimates of project Investment (Capital) Costs are estimated as Rs. 62,355,149. These are converted in to Economic Costs as Rs. 54,248,980 by applying Standard Conversion Factor (SCF) of 0.87.

Sr. No.	Description	Financial Costs	Economic Costs @ 0.87 SCF
		(Rupees)	
Project Investment Costs			
I	Road Works	57,574,905	50,090,168
II	Contingency, Sales tax, ESMP budget etc.	4,780,243	4,158,812
	Total Investment Costs	62,355,149	54,248,979
SAY		62.36 million	54.25 million

World Bank would finance project via loan to Government of Pakistan / Punjab, which will trickle down to MC Kamalia as grant.

1.1.2. O&M Costs

The roads are already being repaired and maintained by the District Council Unit Kamalia out of its own financial resources. No additional cost will be required after completion of the improvement and upgradation of the roads, rather the repair cost will be reduced for the initial years.

1.1.3. Project Economic Benefits

Theoretically, the project involves the provision of a public good so it is set to a number of 'wider' economic benefits to the entire population of the concerned area.

1.1.3.1. Direct Benefits

The major economic direct benefits from the project include:

- **Road User Benefits**
 - a) Vehicle operating cost savings
 - These include fuel and lubricant costs, spare part cost, tyre cost, maintenance cost and depreciation cost among others
 - b) Travel time saving OR travel delay reductions
- **Other benefits**
 - c) Increase in land values / assets / properties along the project roads

1.1.3.2. Indirect Benefits

Some indirect economic benefits may include:

- a) Accident reduction, if any.
 - Cost of human fatal accident, injury, or hospitalization
- b) Induced travel, including new trips and changes in mode, route, and time of travel
- c) Better and improved connectivity to further infrastructure, consequently connecting further markets and opportunities
- d) Building capacity and skills that contribute to the efficiency and sustainability of the roads sector

- e) Benefits of newly constructed / improved / widened road's technical characteristics that enable road operability in all weather conditions, especially rainy whether
- f) Reduced fuel consumption due to reduction in stopped vehicular delays (idling fuel consumption)

Benefits of purely socio-economic nature may include:

- a) Increased household income and appreciation in value of land adjacent to project roads, resulting in higher aggregate economic output
- b) The project is expected to generate skilled and non-skilled jobs especially during construction period and onwards for roads maintenance works.
- c) Development of commercial activities / shops / business along improved / widened proposed project roads, resulting in income generation of project area people.
- d) Overall Social and economic uplift of the project roads area.
- e) Easy / comfortable travelling (made possible due to project works) provides a state of complete physical, mental, and social well-being to the people of the area.

For a project of a relatively mega scale involving main roads or other transport infrastructure, it is possible to quantify some of these benefits such as land appreciation, vehicle operating costs with necessary data inputs such as:

- Sizeable average daily traffic data by vehicle type (existing and projected),
- Road geometry, pavement structure, road condition, and vehicle operating cost parameters, using the highway Development Model 4 (HDM-4).
- Travel time data etc.

1.1.4. Economic Analysis

However, the proposed city roads, currently are very small (in length) and do not have sizeable motorized traffic, thereby sizeable economic benefits not expected to accrue and thereby are not quantified and B/C Ratio, NPV and EIRR not calculated.

1.2. Financial

Project Financial Investment Costs have been estimated as Rs. 62,355,149 million. (For details, refer to Section 1.1.1).

Provision of efficient / good roads facility is a public good and thereby responsibility of the Government. Road users will not thereby be tolled for using the improved project roads. No revenues (public or private) are anticipated to be directly generated. Hence, a financial analysis is not required as there is no positive cash flow or direct revenue stream that contributes to the calculation of an internal rate of return (IRR) or payback period or cost-benefit ratio. There are no land acquisition or resettlement requirements (in case of roads widening) as the roads are owned by the government. Consequently, the capital cost of the project will not be recovered. Any other realized costs after completion will be borne by the government from some other income source, such as municipal budgetary or other earmarked resources. The NPV of the project will simply be the cost of the project, as we are not anticipating any O & M costs and revenue.

1.3. Social Benefits with Indicators

With the ease of transportation that comes with the construction of project roads, women will have greater enablement and access to economic opportunities and services. An overall change/uplift in livelihood of people around project site is expected due to increase in employment opportunities, raise in incomes, and raise in commercial activities (shops) along road (if any) etc. The roads work would decrease transport costs, ease / increase access to jobs, schools, stores / markets, recreation and other community services and amenities, , foster economic integration, stimulate competition, generate agglomeration economies, encourage citizen satisfaction ad build trust with the government. These effects can be reflected in increased land values.

1.4. Employment Generation (direct and indirect)

Increased access to the economy from the improvement of the subject road will increase employment in and across project site. It will also create a positive effect on employees, working in various institutions/offices along project road, in terms of their performance and productivity and, hence wages. During construction, employment for the local people of the project area will be available. There will be indirect employment resulting from easier and greater access to opportunities across local geographies. Expected construction of commercial activities / shops (if any) along proposed road will also result in increased employment generation.

1.5. Environmental Impact and Clean Development Mechanism Assessment

Air emission and greenhouse gas reduction will result from the construction/improvement of project roads. During the construction phase, however, issues may arise from the generation of dust, emission of air pollution, noise, and traffic congestion due to traffic lane reduction and redirection.

Paved / improved road would reduce dust element and hence elimination of challenges to human health.

Positive change in the aesthetic/visual scene of the area would occur due to construction of paved and clean roads and expected plantation / greenery along roadsides (if space available).

1.6. Impact of delays on project cost and viability

Delays in the project will cause the total cost of the project to go up due to ever increasing inflationary pressures.

ANNEXURE – E

E&S Screening Checklists and Mitigation Plan

ESMP Implementation Estimated Budget

Sr. No.	Description	Quantity	Per Unit Cost (PKR)	Total Cost (PKR)
1. Environmental Monitoring				
1.1	Drinking Water Quality Testing	2 samples for each road (1 at start of subproject other near the end of the subproject) Total 12)	15,000	60,000
1.2	Air quality monitoring covering CO, SO ₂ , O ₂ , NO ₂ , NO, NO _x , CO ₂ , PM _{2.5} , and PM _{2.10} , Smoke (At each park)	4	25,000	100,000
1.3	Noise level Monitoring	4	1000	4,000
Subtotal (1)				164,000
2. Implementation of OHS Requirements				
2.1	Remuneration of Environmental Manager	1 for 4 Months	70,000	280,000
2.2	Preparation of site specific EMPs	4	1,000	4,000
2.3	Purchase of PPEs			
a.	Safety Shoes Pairs	15	4,000	60,000
b.	P. Caps	50	200	20,000
c.	Hard Hats	30	500	15,000
d.	Glowing Jackets	60	300	18,000
e.	Pairs of Gloves	100	100	10,000
f.	Face Masks	1,000	10	10,000
g.	Sanitizers	30	300	9,000
2.4	Establishment of Medical Kit	2	50,000	100,000
2.5	Medicines (LS)	Lump Sum	50,000	50,000
2.6	Miscellaneous	Lump Sum	10,000	10,000
Subtotal (2)				586,000
Total (1+2)				750,000 (Rs)

Environmental & Social Screening Checklist

Instructions:

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

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 document¹⁰ of sub-projects at planning stage and will be duly signed by the relevant ESFP and endorsed by the respective DPO-ESM

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

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

Name of ESFP:	Muhammad Omar Nawaz (I&S) Younis Saleem- MOP						
Name of MC:	Kamalia						
Sub-Project Sector:	Road						
Sub-Project Title:	Laying of Tuff Pavers (1.05 Km) from Daras Chousia Darbar Dargahi Shah via Malkan wali Bhani Main Gate Fazil Dewan Park City Kamalia						
Sub- Project Categorization:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">E-1</td> <td style="width: 50%;">S-1</td> </tr> <tr> <td>E-2</td> <td>S-2</td> </tr> <tr> <td>E-3 ✓</td> <td>S-3 ✓</td> </tr> </table>	E-1	S-1	E-2	S-2	E-3 ✓	S-3 ✓
E-1	S-1						
E-2	S-2						
E-3 ✓	S-3 ✓						
Date of Screening:	20-10-2022						
Anticipated Project Activities	<ul style="list-style-type: none"> ➤ Earthwork undressed lead up to a single throw of Kassi, phaorah or shovel ➤ Compaction of earthwork (soft, ordinary or hard soil)- a) Mixing, moistening earth to optimum moisture content in layers for compaction ➤ Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects ➤ Scarifying old road surface including removal of debris within 1 chain (30 m) 						

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

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

Estimated Cost of Subprojects	27,251,675 (Rs) + Rs.375,000 as environment management cost
Completion Time/Duration	02 months
Estimated Labor for Subproject	

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		✓	No legally protected area lies within 1000 meters jurisdiction of Sub-Project.
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project ³		✓	No water body observed within 500 meters in the Sub-Project area
Estuarine		✓	Not observed in Sub-Project area
Special area for protecting biodiversity		✓	No Wild life park or other biodiversity areas observed during site E & S investigation.
Buffer zone of protected area		✓	No buffer zone for fauna and flora exists surrounding the project area
Mangroves Forest		✓	There is no existence of any mangrove in the project area.
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		✓	No area of environmental importance such as forest /game reserve, orchid /crops observed within the project interventions.
Socially sensitive /important areas/communities/people?			
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, Gordwarah, Temple, Fort, archeological/historical site) within 100 m of the proposed subproject ⁴	✓		02 Mosque, Darbar Peer Shah Bukhari observed within 10 meters of the Sub-Project alignment. Sub-Project interventions have no direct/indirect significant environmental & social impacts.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project ⁵	✓		02 Schools observed along with the Sub-Project alignment. There would be negligible hindrance in the mobility of people during Tuff Tile Pavement construction phase. No other significant adverse impacts on sensitive receptors are foreseen.
Any graveyard of local community (Muslims or Christians)		✓	Eid Gah Graveyard (Muslim) exist within 15 meters of the Sub-Project. There is no significant direct/indirect impact envisaged.
Any demographic or socio-economic aspects of the sub-project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ⁶ of the society and women or children)?		✓	No negative impact observed on vulnerable groups (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities) Sub-Project area.

³Ibid.

⁴ According to Environmental Assessment Guidelines adopted by Punjab EPA

⁵Ibid.

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

Screening Questions	Yes	No	Remarks
Already existing infrastructure ⁷ (including public amenities) which may be required to dismantle or may be affected temporarily by any means?		✓	Public amenities, ramps are observed but will not be dismantled during Laying of Tuff Pavers and no entitlement recorded as per proposed Tuff Pavers laying dimensions.
B. Potential Environmental Impacts			
Will the Sub-Project cause...			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	Environmentally sensitive or protected areas do not exist within Project area.
2. Cutting of trees?		✓	No Cutting of trees involved during construction phase
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?			Not observed in Sub-Project area
4. Generation of wastewater during construction or operation?		✓	No wastewater generation during construction and operation envisaged.
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		✓	No such impact anticipated as no wastewater will be generated during construction activities.
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 such impact foreseen as work activities are limited up to fixing of Tuff Pavers on eroded roads.
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		✓	No construction labor camps envisaged due to limited scope of work under Sub-Project and unskilled local labor will be engaged for the construction activities.
8. Over pumping of ground water, leading to salinization and ground subsidence?		✓	No over pumping/pumping involved in scope of construction activities.
9. Serious contamination of soil due to construction works?		✓	These interventions are of small scale and have no minor Impact on soil conditions.
10. Aggravation of solid waste problems in the area?		✓	No aggravation of solid waste problems in the area is anticipated. The waste broken/ruff tiles will be collected and disposed on daily basis.
11. Generation of hazardous waste?		✓	No hazardous waste generation foreseen during construction phase.
12. Increased air pollution due to sub-project construction and operation?		✓	It will be a negligible impact as per construction activities.
13. Noise and vibration due to sub-project construction or operation?		✓	It will be a negligible impact as per construction activities.
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		✓	No such impact anticipated after reviewing construction activities.

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.

Screening Questions	Yes	No	Remarks
15. Use of chemicals during construction?		✓	No chemicals will be used during construction activities
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)?			No impairment/damage to any PCR envisioned as per scope of construction activities
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	No displacement/resettlement of people involved in Sub-Project scope.
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ⁸ (mentioned above)?		✓	There will be no direct/indirect impact on the poor women, children and or other vulnerable groups.
4. Temporary impediments in movements of people/transport and animals?	✓		There would be negligible hindrances in the mobility of people during the construction phase. Housekeeping will be ensured by the Contractor in this context.
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 unskilled labor will be preferred by the Contractor due to limited work activities.
6. Social conflicts if workers from other areas are hired?	✓		Contractor will hire local worker during construction activities
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	✓		Contractor will follow EHS SOPs to avoid physical hazards which are part of PC-I.
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?		✓	No hazardous materials required for the construction activities.
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?	✓		Good Housekeeping will reduce such impacts.
10. Any impact on sensitive receptors (mentioned above)			No significant direct/indirect impact foreseen.
11. Any impact of negative nature on already existing infrastructure including public amenities			No damages to any public amenity required for the project interventions.

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

Pictures of Field Visit



Darbar Pir Shah Bukhari Road



Darbar Pir Shah Bukhari



Streets Saran Dogran Wali



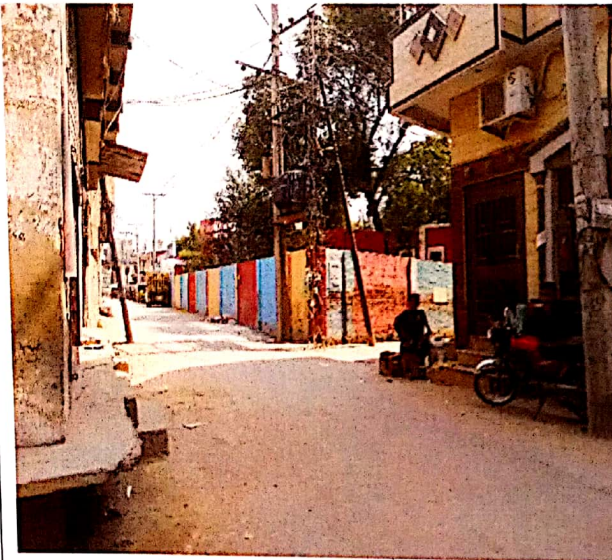
Bank Road



Road near Sajjad Zargrer House



The Nation School, Mohallah Peer Shah Bukhaari



Govt High School near Mohallah Peer Shah



Public Consultation at Mohallah Peer Shah Bukhaari



Poor TST Road at Eid Gah Chowk



Public Consultation at Eid Gah Chowk

Prepared By:

Name: Muhammad Imran

Designation: Environment Specialist

Organization: MM Pakistan

Signature:

Date: 20-10-2022

Endorsed By:

Name: Muhammad Asif Gillani

Designation: Deputy Program Officer ESM

Organization: PMDFC

Signature:

Date: 20-10-2022

INVOLUNTARY RESETTLEMENT SCREENING CHECK LIST

Name of City/MC/LG: Kamalia

Sub-Project Sector: Roads

Sub-Project Title: Laying of Tuff Pavers from Haji Chowk to Pakistan Chowk via Darbar Pir Shah Road, Sajjad Zargar House Bank Road, Kamalia

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

Date of Screening: 22-06-2022

SECTION1	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		Already road exist and land owned by govt. so no land acquired for this sub project
If yes ,then describe the type of land being acquired from the categories below:		✓		No Land acquired for this sub project
Has any AED been conducted at the proposed location by the government ?Yes/No		✓		Ramps are observed in case of encroachment but away from ROW and tuff, pavers cover existing roads area and no land required for this project. No AED been conducted at the proposed location by the government ¹
Land (Quantify and describe types of land being acquired in "remarks column".		✓		No Land acquired for this sub project
Government and LG owned land free of occupation (agriculture or settlement)		✓		Already road exist and land is owned by govt.
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		No Land acquired for this sub project
Private land		✓		No Land acquired for this sub project
Residential		✓		No Land acquired for this sub project
Commercial		✓		No Land acquired for this sub project
Agricultural		✓		No Land acquired for this sub project
Communal		✓		No Land acquired for this sub project
Others (specify in "remarks").		✓		Already road exist and land is owned by govt.
Name of owner/owners and type of ownership document if available.		✓		Already road exist and land is owned by govt.
If land is being acquired, describe any structures constructed on it		✓		No Land acquired for this sub project
Land-based assets:		✓		No Land acquired for this sub project
Residential structures		✓		No Land acquired for this sub project
Commercial structures (specify in "remarks")		✓		No Land acquired for this sub project
Community structures (specify in "remarks")		✓		No Land acquired for this sub project

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

Environmental & Social Screening Checklist

Instructions:

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

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

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

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

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

Name of ESFP:	Muhammad Omar Nawaz (I&S) Younis Saleem- MOP						
Name of MC:	Kamalia						
Sub-Project Sector:	Road						
Sub-Project Title:	Laying of Tuff Pavers (0.95km) from Haji Chowk to Pakistan Chowk via Darbar Pir shah Road, Sajjad Zargar House Bank Road Kamalia						
Sub- Project Categorization:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">E-1</td> <td style="width: 50%;">S-1</td> </tr> <tr> <td>E-2</td> <td>S-2</td> </tr> <tr> <td>E-3 ✓</td> <td>S-3 ✓</td> </tr> </table>	E-1	S-1	E-2	S-2	E-3 ✓	S-3 ✓
E-1	S-1						
E-2	S-2						
E-3 ✓	S-3 ✓						
Date of Screening:	20-10-2022						
Anticipated Project Activities	<ul style="list-style-type: none"> ➤ Earthwork undressed lead up to a single throw of Kassi, phaorah or shovel ➤ Compaction of earthwork (soft, ordinary or hard soil)- a) Mixing, moistening earth to optimum moisture content in layers for compaction ➤ Providing and laying road edging of 3" (75 mm) wide and 9" (225 mm) deep brick on end, complete in all respects ➤ Scarifying old road surface including removal of debris within 1 chain (30 m) 						

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

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

Estimated Cost of Subprojects	30,323,231(Rs) + 375,000 Rs as environment management cost including tree plantation cost
Completion Time/Duration	02 months
Estimated Labor for Subproject	

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Sub-Project area adjacent to or within any of the following:			
Environmentally sensitive areas?			
Legally protected Area		✓	No legally protected area lies within 1000 meters jurisdiction of Sub-Project.
Any surface water body (river, canal, stream, lake, wetland) within 250 meter of the proposed sub project ¹¹		✓	No water body observed within 500 meters in the Sub-Project area
Estuarine		✓	Not observed in Sub-Project area
Special area for protecting biodiversity		✓	No Wild life park or other biodiversity areas observed during site E & S investigation.
Buffer zone of protected area		✓	No buffer zone for fauna and flora exists surrounding the project area
Mangroves Forest		✓	There is no existence of any mangrove in the project area.
Man-made forest /game reserve, orchid /crops or any other area of environmental importance		✓	No area of environmental importance such as forest /game reserve, orchid /crops observed within the project interventions.
Socially sensitive /important areas/communities/ people?			
PCRs and or any site of cultural/religious importance (Graveyard, Shrine, Mosque, Church, <i>Gordwarah</i> , Temple, Fort, archeological/historical site) within 100 m of the proposed subproject ¹²	✓		01 Mosque, observed within 10 meters of the Sub-Project alignment. There would be hindrances in the mobility of people during the construction phase Sub-Project interventions have no direct/indirect significant environmental & social impacts.
Sensitive receptors (Schools, colleges, hospitals and clinics) within 100 meter of the proposed sub project ¹³	✓		03 Schools observed along with the Sub-Project alignment. There would be negligible hindrance in the mobility of people during Tuff Tile Pavement construction phase. No other significant adverse impacts on sensitive receptors are foreseen.
Any graveyard of local community (Muslims or Christians)		✓	Not observed in sub project area
Any demographic or socio-economic aspects of the sub-project area that are already vulnerable (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities, people in old age, socially isolated segments ¹⁴ of the society and women or children)?		✓	No negative impact observed on vulnerable groups (e.g., high incidence of marginalized populations, rural-urban migrants, illegal settlements, squatters, ethnic minorities, people with disabilities) Sub-Project area.

¹¹Ibid.

¹² According to Environmental Assessment Guidelines adopted by Punjab EPA

¹³Ibid.

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

Screening Questions	Yes	No	Remarks
Already existing infrastructure ¹⁵ (including public amenities) which may be required to dismantle or may be affected temporarily by any means?	✓		Public amenities, ramps are observed but will not be dismantled during Laying of Tuff Pavers and no entitlement recorded as per proposed Tuff Pavers laying dimensions.
B. Potential Environmental Impacts Will the Sub-Project cause...			
1. Disturbance to habitats/biodiversity of environmentally sensitive or protected areas?		✓	Environmentally sensitive or protected areas not exist around the project intervention so impact not observed in sub project area
2. Cutting of trees?		✓	No Cutting of trees involved during construction phase
3. Disruption to habitats/biodiversity of surrounding ecosystem/environment?		✓	Not observed in Sub-Project area
4. Generation of wastewater during construction or operation?		✓	No wastewater generation during construction and operation envisaged.
5. Pollution of surface water/ground water due to wastewater discharge from construction site or due to direct/indirect disposal of waste water?		✓	No such impact anticipated as no wastewater will be generated during construction activities.
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 such impact foreseen as work activities are limited upto fixing of Tuff Pavers on eroded roads.
7. Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?		✓	No construction labor camps envisaged due to limited scope of work under Sub-Project and unskilled local labor will be engaged for the construction activities.
8. Over pumping of ground water, leading to salinization and ground subsidence?		✓	No over pumping/pumping involved in scope of construction activities.
9. Serious contamination of soil due to construction works?		✓	These interventions are of small scale and have no minor Impact on soil conditions.
10. Aggravation of solid waste problems in the area?		✓	No aggravation of solid waste problems in the area is anticipated. The waste broken/ruff tiles will be collected and disposed on daily basis.
11. Generation of hazardous waste?		✓	No hazardous waste generation foreseen during construction phase.
12. Increased air pollution due to sub-project construction and operation?		✓	It will be a negligible impact as per construction activities.
13. Noise and vibration due to sub-project construction or operation?		✓	It will be a negligible impact as per construction activities.

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

Screening Questions	Yes	No	Remarks
14. Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents due to solid/liquid?		✓	No such impact anticipated after reviewing construction activities.
15. Use of chemicals during construction?		✓	Environmentally sensitive or protected areas do not exist within Project area.
C: Potential Social Impacts Will the Sub-Project cause...			
1. Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to Physical Cultural Resources (PCRs)?	No impairment/damage to any PCR envisioned as per scope of construction activities		
2. Displacement or involuntary resettlement of people? (physical displacement and/or economic displacement) (If "Yes", please also fill Involuntary Resettlement Screening Checklist)		✓	No displacement/resettlement of people involved in Sub-Project scope.
3. Disproportionate impacts on the poor, women and children and or other vulnerable groups ¹⁶ (mentioned above)?		✓	There will be no direct/indirect impact on the poor women, children and or other vulnerable groups.
4. Temporary impediments in movements of people/transport and animals?	✓		There would be negligible hindrances in the mobility of people during the construction phase. Housekeeping will be ensured by the Contractor in this context.
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 unskilled labor will be preferred by the Contractor due to limited work activities.
6. Social conflicts if workers from other areas are hired?	✓		Contractor will hire local worker during construction activities
7. Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?	✓		Contractor will follow EHS SOPs to avoid physical hazards which are part of PC-I.
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?		✓	No hazardous materials required for the construction activities.
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?		✓	Good Housekeeping will reduce such impacts.
10. Any impact on sensitive receptors (mentioned above)		✓	No significant direct/indirect impact foreseen.

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

Screening Questions	Yes	No	Remarks
11. Any impact of negative nature on already existing infrastructure including public amenities		✓	No damages to any public amenity required for the project interventions.

Pictures of Field Visit



Poor Road near Fazil Dewan Park



Poor Road Condition near Jamia Masjid Ghosia



Worn TST Road of Govt high school near Jamia Masjid Ghosia



Worn TST Road near Mohallah Fazil Deewan



Public Consultation at Derach Saeed near Mohallah Fazil Deewan



Govt Girls High School Madina Abad at Mohallah Fazil Deewan



Quaid e Azam Science Collage, near Mohallah Fazil Deewan



Sewerage Rehabilitation near Fazil Deewan

INVOLUNTARY RESETTLEMENT SCREENING CHECKLIST

Name of City/MC/LG: Kamalia

Sub-Project Sector: Roads.

Sub-Project Title: Laying of Tuff Pavers from Daras Ghousia Darbar Dargahi Shah via Malkan wali Bhani Main Gate Fazil Dewan Park City Kamalia

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

Date of Screening: 22-06-2022

Section	Yes	No	Expected	Remarks
Does the project require land acquisition? Yes/No		✓		Already road exist and land owned by govt. so no land acquired for this sub project
If yes, then describe the type of land being acquired from the categories below:		✓		No Land acquired for this sub project
Has any AED been conducted at the proposed location by the government? Yes/No		✓		Ramps are observed in case of encroachment but away from ROW and tuff, pavers cover existing roads area so no land required for this project. No AED been conducted at the proposed location by the government ¹
Land (Quantify and describe types of land being acquired in "remarks column".		✓		No Land acquired for this sub project
Government and LG owned land free of occupation (agriculture or settlement)		✓		Already road exist and land is owned by govt.
Government or state-owned land (other than LG) free of occupation (agriculture or settlement)		✓		No Land acquired for this sub project
Private land		✓		No Land acquired for this sub project
Residential		✓		No Land acquired for this sub project
Commercial		✓		No Land acquired for this sub project
Agricultural		✓		No Land acquired for this sub project
Communal		✓		No Land acquired for this sub project
Others (specify in "remarks").		✓		Already road exist and land is owned by govt.
Name of owner/owners and type of ownership document if available.		✓		Already road exist and land is owned by govt.
If land is being acquired, describe any structures constructed on it		✓		No Land acquired for this sub project
Land-based assets:		✓		No Land acquired for this sub project
Residential structures		✓		No Land acquired for this sub project

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

Prepared By:

Name: Muhammad Imran

Signature:



Date: 20-10-2022

Endorsed By:

Name: Muhammad Asif Gillani

Signature:

Date: 20-10-2022

Laying of Tuff Pavers in Kamalia City

Mitigation Plan for Environmental and Social Impacts

It is estimated that 30-35 labour will be required to complete the works in an estimated duration of six months. The machinery required by the contractor for the execution of subproject would include shovels, compactors, water pumps, tractors with trolleys, service vehicles etc. The construction material (tuff tiles, sand etc.) would be transported through contracted vehicles.

The impacts, mitigation measures, monitoring indicators, frequency and responsibility has been discussed in Environmental and Social Mitigation Measures as detailed below;

Environmental and Social Mitigation Measures

Activity/ Issue	Impacts	Mitigation Measures	Monitoring Indicators	Frequency	Responsibility
Construction Phase					
Construction Waste Generation	Hindrance in movement of pedestrian /vehicles of local community	Remove any left-over construction material/wastes from the construction sites.	Stockpiling of Tuff Pavers & debris tuff pavers	Continuously	Execution by Contractor Monitoring by Supervision Consultant/ PMDFC
Manpower at work	Occupational Health and Safety (OHS) Issues	Implementation of Environment, health and safety SOPs for Labour/ workers, Provision of PPEs (Hand Gloves, Dust Mask)	Environment, health and safety SOPs for Labour/workers implemented in totality	Monitoring of SOPs implementation on daily basis.	Implementation by Contractor Monitoring by Supervision Consultant/ PMDFC
Construction works	Accident risks	Implementation of EHS SOPs. Usage of PPEs; Provision of first aid kits machinery safely:	PPEs provided and used; Record of any accident.	Daily	Execution by Contractor Monitoring by Supervision Consultant/ PMDFC
	If Damage to any infrastructure	Restoration/ rehabilitation of damaged infrastructure with entire satisfaction of the affected persons.	Visual inspections; Photographic records; Consultations/Interviews; Infrastructure restoration records.	Daily	Execution by Contractor Monitoring by Supervision Consultant/ PMDFC
	House Keeping	Construction tools will be properly placed to avoid any hazard.	Visual inspections; Photographic records	Daily	Execution by Contractor Monitoring by Supervision Consultant/ PMDFC

Post Construction Phase					
Manhole maintenance	Damage to manholes	Timely repair of manholes	Visual observation	Fortnightly reconnaissance	Municipal Committee
Street maintenance	Damage to tuff pavers	Timely repair of damaged portions	Visual observation	Quarterly reconnaissance	Municipal Committee

1 .SOPs issued by the Go Punjab during COVID-19 Pandemic will be implemented

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

Table: Workers/Labour Health and Safety at Construction Site

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

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

Table: Summary of Recommended Personal Protective Equipment According to Hazard¹⁷

Objective	Workplace Hazards	Suggested PPE
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc.
Head protection	Falling objects, inadequate height clearance, and overhead power cords.	Plastic Helmets with top and side impact protection.
Hearing protection	Noise, ultra-sound.	Hearing protectors (earplugs or ear muffs).
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.
Hand protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.

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

Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi gas personal monitors, if available.
	Oxygen deficiency.	Portable or supplied air (fixed lines). On-site rescue equipment.
Body/leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration.	Insulating clothing, body suits, aprons etc. of appropriate materials.

Social Management Plan

The purpose of Social Management Plan (SMP) for two roads (Tuff Pavers) is to ensure that all necessary identified measures have been adopted in order to protect the social situations and to comply with country Environmental, Social legislation, and applicable World Bank Core Principles.

The impacts, mitigation measures, monitoring indicators, frequency and responsibility has been discussed in Social Management Plan (SMP). Two Roads are covered during this Project which are;

1. Laying of Tuff Pavers from Haji Chowk to Pakistan Chowk via Darbar Pir Shah Road, Sajjad Zargar House Bank Road in Kamalia. (0.95 km)
2. Laying of Tuff Pavers from Daras Ghousia Darbar Dargahi Shah via Malkan wali Bhani Main Gate Fazil Dewan Park in Kamalia. (1.05 km)

The Sub-Project involves replacement of broken tuff pavers with sand filling, watering and laying of Tuff Pavers for a road length of 2.00 km included in the subproject. It is estimated that 30-35 labour will be required to complete the works in an estimated duration of 3 months. The machinery required by the contractor for the execution of subproject would include shovels, compactors, water pumps, tractors with trolleys, service vehicles etc. The construction material (tuff tiles, sand etc.) would be transported through contracted vehicles. The area facilitated by both roads are mixed in use (Mostly Residential).

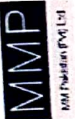
Table: Social Management Plan

Sub-project Laying off Tuff Pavers in Kamalia City

Proposed Sub-project activities	Potential Env./Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Responsibility
Design/Pre-Construction Phase							
Before Construction: During detailed designing of the sub-project	Identification of Locations for Labor Camps and ancillary facilities	Medium	<ul style="list-style-type: none"> ➤ In order to prevent a nuisance, Solid, and liquid effluent waste disposal issue and minimal disturbance to all key receptors and the traffic is not disrupted by labor camps so prefer to select a house as a labor camp near to project site area. All necessary facilities and amenities shall be provided in these camps such as resting area, drinking water, electricity, supply of water. ➤ The use of proper planning while identifying locations for the labor camps. 	MC			<ul style="list-style-type: none"> ◆ ESFPs ◆ DPO ESSs ◆ SPO, ID/ PD ◆ MC
Construction Phase							
Dismantling, Excavation, and filling operations	Social Issues: <ul style="list-style-type: none"> ◆ Solid waste may cause disturbance in mobility ◆ Safety hazards to labor and nearby resident population. ◆ Worse House Keeping ◆ Temporary blockage of road may restrict mobility ◆ Conflict with public and public complaints 	High	<ul style="list-style-type: none"> ➤ Solid waste will be properly disposed off at designated place of MC. ➤ Updated and tuned machinery will be used to control noise. ➤ Water sprinkling will be carried out at consecutive intervals as per instruction ➤ Avoiding construction activities during nights. ➤ Provide appropriate signage near the construction activities to sensitize the community and minimize accidents. ➤ Public must be informed about Sub-project major activities, duration of scheme, time and schedule, anticipated impacts and their proposed Mitigation Measures. The contact Nos. of focal person of Grievance Redress 	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> ❖ Daily site visit during construction phase ❖ Fortnightly / Weekly ❖ Once during the construction phase 	<ul style="list-style-type: none"> ◆ ESFPs ◆ DPO ESSs ◆ SPO, ID/ PD



Environment & Social Management Plan (ESMP)



Proposed Sub-project activities	Potential Env./Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Responsibility
			<p>Committee will be displayed at different locations and residents will also be informed about it.</p> <ul style="list-style-type: none"> ➤ Construction work will be done with in the boundary wall of the area which belongs to MC. In this way the business of the shops keepers will not be affected. Contractor will make sure that labor must not damage the property and structures of the residents. In case of damage compensation will be provided as per entitlements. 				
<p>Civil work</p>	<p>Social Issues:</p> <ul style="list-style-type: none"> ◆ Noise and vibration disturbances to residents and businesses ◆ Road side visibility can be reduced and dusty environment leads to respiratory diseases. ◆ Safety issues ◆ Health problems or immediate risk may take place ◆ Spillage of fuel and oil ◆ Traffic jams and congestion may take place and cause inconvenience to the people where the construction of interchanges will take place. ◆ Worse House Keeping 	<p>Medium</p>	<ul style="list-style-type: none"> ➤ Immediately transport the accumulated construction waste/ waste water to a site identified by the implementing MC ➤ Removal of excess materials or use as construction material with the approval of the Engineer. ➤ Cleaning of sites upon completion of schemes. ➤ Establish schedule and others specific restrictions ➤ Limit work to day light hours as possible ➤ Use of less noise generating equipment ➤ Regular water sprinkling with the help of water bowsers ➤ Cordon off construction area ➤ Contractor will ensure provision of appropriate housing, water supply, and sanitation facilities to construction labor. ➤ PPEs will be provided to workers ➤ Availability of safe drinking water and food for the workers. ➤ This indirect impact of dust and noise can be reduced by sprinkling water and reducing the noisy activities during the prayer timings. 	<p>Contractor</p>	<p>Visual/ Photographic record, Public consultation, Environment Quality Analysis reports, GRM Complaints record</p>	<ul style="list-style-type: none"> ❖ Daily site visit during construction phase ❖ Fortnightly / Weekly ❖ Once during the construction phase 	<ul style="list-style-type: none"> ◆ ESFPs ◆ DPO ◆ ESSs ◆ SPO ◆ ID/IPD



Proposed Sub-project activities	Potential Env./Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Responsibility
	<ul style="list-style-type: none"> ◆ Reduced pedestrian access to residences and businesses ◆ Temporary passage way interruption ◆ Conflicts. ◆ Dissatisfaction for the Sub-project Scattered construction material may obstruct mobility. ◆ Due to the proposed sub-project, houses, mosques and schools existing in and around sub-project area may get affected indirectly due to noise and dust. 						
Construction material, storage, handling and use	<p>Social Issues:</p> <ul style="list-style-type: none"> ◆ Health risk to workers and local inhabitants. ◆ Land acquisition for storage of construction material ◆ Accidents/Injuries expected if neglected ◆ Blockage of passage for pedestrians ◆ Haphazard arrangement of construction material 	Medium to negligible	<ul style="list-style-type: none"> ➢ If land acquired for storage of machinery & materials on temporarily basis: Contractor is liable to compensate the land owner according to agreement/ negotiations/ voluntarily ➢ Contractor will lay/ utilize construction materials as per work requirement from his store. ➢ Contractor will use night vision reflective signboards/ reflective tapes to cordon off the area during construction activities. 	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> ❖ Daily site visit during construction phase ❖ Fortnightly / Weekly ❖ Once during the construction phase 	<ul style="list-style-type: none"> ◆ ESFPs ◆ DPO ◆ ESSs ◆ SPO ◆ ID/PD
Labor Camp (if established by Contractor)	<ul style="list-style-type: none"> ◆ Health impacts due to absence of housing and sanitation facilities in labor camp. 	Medium	<ul style="list-style-type: none"> ➢ Contractor will ensure provision of appropriate housing, water supply, and sanitation facilities to construction labor. ➢ Good housekeeping will be ensured inside camp site 	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> ❖ Daily site visit during construction phase ❖ Fortnightly / 	<ul style="list-style-type: none"> ◆ ESFPs ◆ DPO ◆ ESSs ◆ SPO ◆ ID/PD



Environment & Social Management Plan (ESMP)



Proposed Sub-project activities	Potential Env./Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Responsibility
			<ul style="list-style-type: none"> ➤ Labor will be provided with quality food. ➤ Better heating & cooling facilities will be provided by the Contractor as per season accordingly. ➤ Better accommodation will be ensured by the Contractor. ➤ It's better to accommodate labor in Containers Camps/ houses with all amenities. ➤ Alternative routes will be provided. ➤ Sign boards and posters will also be displayed at Sub-project site and adjacent areas as well. Inform the residents about timing, schedule and construction work duration. ➤ Work will be done in portions so that the alternate road may be used safely and vehicles movement will not be disturbed. ➤ Contractor will submit Traffic Management Plan and approve from ESFPs before the execution of work. 	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> ❖ Weekly ❖ Once during the construction phase 	
Vehicle Movements	<ul style="list-style-type: none"> ◆ Traffic congestion ◆ Conflicts 	High		Contractor	Visual/ Pictures	<ul style="list-style-type: none"> ❖ Daily site visit during construction phase ❖ Fortnightly / Weekly ❖ Once during the construction phase 	<ul style="list-style-type: none"> ◆ ESFPs ◆ DPO ◆ ESSs ◆ SPO ◆ ID/PD
Safety Issues	<ul style="list-style-type: none"> ◆ Accidents 	High	<ul style="list-style-type: none"> ➤ Contractor will ensure site safety using safety cautions (night vision), boards, flagmen, cordon tapes for smooth flow of traffic and pedestrians during the construction phase of the Sub-Project. 	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> ❖ Daily site visit during construction phase ❖ Fortnightly / Weekly ❖ Once during the construction phase 	<ul style="list-style-type: none"> ◆ ESFPs ◆ DPO ◆ ESSs ◆ SPO ◆ ID/PD
Public access	<ul style="list-style-type: none"> ◆ Problems for pedestrians. Normal mode of transport may be disturbed during Sub-project execution. 	Medium	<ul style="list-style-type: none"> ➤ Alternate access route will be made sure. ➤ Construction works will be done within the premises of MC facility area. ➤ Cordon off excavated area. 	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> ❖ Daily site visit during construction phase ❖ Fortnightly / Weekly 	<ul style="list-style-type: none"> ◆ ESFPs ◆ DPO ◆ ESSs ◆ SPO ◆ ID/PD

Proposed Sub-project activities	Potential Env/Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Responsibility
Drinking water contamination	<ul style="list-style-type: none"> Health issues. Public Conflicts with labor. 	Medium	<ul style="list-style-type: none"> Control of waste water with Sucker machines to avoid drinking water contamination. Contact Nos. of MC help line will be displayed at Sub-project site and public may contact on these Nos. in case of any emergency. Minor leakage control with tapes. Disposal of construction waste in environment friendly way. 	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> Once during the construction phase Daily site visit during construction phase Fortnightly / Weekly Once during the construction phase 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/IPD
Occupational Health & Safety	<ul style="list-style-type: none"> Injuries to workers/LTI 	High	<ul style="list-style-type: none"> Contractor will follow HSE SOPs for all activities on the site. Workers will be trained and guided to follow SOPs and will be provided with necessary PPEs (Safety Helmets, Safety Shoes, Gloves, Chemical Masks etc.) wherever required. First aid will be provided immediately to save the life of affected person. Careful monitoring will also be carried out. 	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> Daily site visit during construction phase Fortnightly / Weekly Once during the construction phase 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/IPD
Damage to Public Infrastructure/utilities	<ul style="list-style-type: none"> Accidents/Incidents/Injuries Structural loss Social Conflicts 	Low	<ul style="list-style-type: none"> Contractor will ensure no damage to public utilities or structures. Contractor will provide compensation for the damages to entitle accordingly. 	Contractor	Visual/ Pictures	<ul style="list-style-type: none"> Daily site visit during construction phase Fortnightly / Weekly Once during the construction phase 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/IPD



Environment & Social Management Plan (ESMP)



MMP (Punjab) Pvt. Ltd.

Proposed Sub-project activities	Potential Env./Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Responsibility
Sexual Harassment, Labor Influx & Child Labour	<ul style="list-style-type: none"> Social Conflicts 	Low	<ul style="list-style-type: none"> Contractor will give behavioral training to the workforce. Contractor will hire local labor for un-skilled works. Child labour hiring is prohibited 	Contractor	Visual/Pictures/ Reported/ Complains by public during visit	<ul style="list-style-type: none"> Daily site visit during construction Fortnightly / Weekly Once during the construction 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/IPD
COVID-19 SOPs implementation	<ul style="list-style-type: none"> Spread of Corona among the labor 	Low	<ul style="list-style-type: none"> Contractor will provide face masks to the labor on daily basis to reduce Corona impact. Contractor will follow COVID-19 guidelines during construction works 	Contractor	Visual/Pictures	<ul style="list-style-type: none"> Daily site visit during construction Fortnightly / Weekly Once during the construction 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/IPD
Operational Phase							
Restoration of Road	<ul style="list-style-type: none"> Accidents/Injuries due to haphazard refilling of trenches. 	Low	<ul style="list-style-type: none"> Contractor will do compaction of refilled material into trenches after installation of tube wells. 	Contractor	Visual/Pictures	<ul style="list-style-type: none"> Daily site visit during construction Fortnightly / Weekly Once during the construction phase 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/IPD
Seepage/Spill water	<p>Social issues:</p> <ul style="list-style-type: none"> No significant impacts will arise 	Low	<ul style="list-style-type: none"> Ensure proper design, construction and operation of the structure and system to minimize seepage and appropriate implementation techniques. In case of failure of nearby building structures, foundation, monetary compensation shall be provided. 	Contractor	Visual/Pictures	<ul style="list-style-type: none"> Daily site visit during construction phase Fortnightly / Weekly Once during the construction phase 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/IPD



Environment & Social Management Plan (ESMP)



Proposed Sub-project activities	Potential Env./Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Responsibility
After the completion of the construction work	<ul style="list-style-type: none"> Community grievances 		<ul style="list-style-type: none"> Ensures the timely resolution of community grievances after the construction 	MC		<ul style="list-style-type: none"> Once in a week 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/PD
After the completion of the construction work	<ul style="list-style-type: none"> Worker grievance 		<ul style="list-style-type: none"> Ensures the timely resolution of worker grievances to prevent lost time incidents during the operational stage 	MC		<ul style="list-style-type: none"> Once in a week 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/PD
After the completion of the construction work	<ul style="list-style-type: none"> Generation of solid waste 		<ul style="list-style-type: none"> Determining sufficient and appropriate dumping areas Ensuring impermeability on the grounds of storage areas against possible contamination of soil and groundwater, Sufficient ventilation of the area under conditions where volatile wastes need to be stored, Establishing a suitable drainage system against leaks, Restriction of physical access to waste storage areas (through gates, fences, etc.); ensuring that only authorized persons can enter the storage areas, Placing warning signs and panels with the name and contact number of authorized personnel in storage areas. In order to response in case of emergency such as spills and fire immediately, keep absorbent materials, fire extinguishing equipment, etc. ready at a close location, Quick identification of any possible leaks by periodically performing visual checks in hazardous waste storage areas. Ensuring that wastes are not spilled out of 	MC		<ul style="list-style-type: none"> Once in a week 	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/PD

Proposed Sub-project activities	Potential Env./Social Impacts	Magnitude of Impact	Mitigation Measures	Mitigation Implementation Responsibility	Monitoring Indicators	Monitoring Frequency	Responsibility
After the completion of the construction work	<ul style="list-style-type: none"> Impact of discharge of wastewater 		<p>areas other than those reserved for this purpose and providing all necessary waste management training and periodic repetition of these trainings.</p> <ul style="list-style-type: none"> No waste should be disposed of or burned MC will ensure continuous flow of wastewater into the main sewer lines with safety manners and smooth operation because there is wastewater (sewage) system near the park and its immediate surroundings, wastewater generated will be removed by sewage system. MC will ensure that all the machinery is in working condition and necessary backup material/machinery is available to avoid problems. Coordinating with the operational staff to monitor environmental compliance during operation; Instituting good housekeeping and operating practices, including inventory control to reduce the amount of waste resulting from materials that are out-of-date, off-specification, contaminated, damaged, or excess to needs Materials handling and storage areas needed: Easily accessible in a safe manner Well ventilated Unlikely to be damaged 	MC		Once in a week	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/ID
After the completion of the construction work	<ul style="list-style-type: none"> Operation and maintenance 			MC		Once in a week	<ul style="list-style-type: none"> ESFPs DPO ESSs SPO ID/ID

ANNEXURE - F

Drawings



Detailed Design of Infrastructure Sub- Projects Sectoral Planning & Resident Supervision in 16 cities of Punjab (Package-III – Kamalia)



Road Works Drawings

REHABILITATION OF EXISTING ROADS WITH TUFF PAVERS IN KAMALIA

**01- HAJI CHOWK TO PAKISTAN CHOWK,VIA DARBAR PIRSHAH ROAD SAJJAD
ZARGAR HOUSE,BANK ROAD
(STA 0+000 TO STA 3+102.4151)**

**02- DARAS GHOUSIA TO DARBAR DARGAHI SHAH VIA MALKANWALI
BHANI,MAIN GATE FAZIL DWAN PARK CITY
(STA 0+000 TO STA 3+454.64)**

NOVEMBER - 22





General Drawings

MMP

GENERAL NOTES:

- EXCEPT WHEN OTHERWISE INDICATED, ALL DIMENSIONS AND UNITS ARE IN THE IMPERIAL SYSTEM OF MEASUREMENT
- ALL COORDINATES ARE MEASURED IN FEET AND CORRESPOND TO THE GRID REFERENCE OF UNIVERSAL TRANSVERSE MERCATOR
- ALL ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES OR AS OTHERWISE ENCOUNTERED DURING EXCAVATION PROCESS. ANY DAMAGE TO UTILITIES WILL BE RESTORED AT HIS OWN COST
- BEFORE COMMENCEMENT OF WORK, CONTRACTOR SHALL VERIFY THE EXISTING ELEVATION SHOWN IN TENDER DRAWINGS ALONG WITH THE ENGINEER'S REPRESENTATIVE.
- ANY DISCREPANCIES ON DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR THE CLARIFICATION BEFORE PROCEEDING WITH THE WORK INVOLVED, BY THE CONTRACTOR.
- THE TENDERER SHOULD VISIT THE SITE AND ASSESS SCOPE AND NATURE OF THE WORKS SPECIALLY DISMANTLING ITEMS AND GET INFORMATION, MEASUREMENTS AT HIS OWN AND SATISFY HIMSELF BEFORE QUOTING RATES.
- THE DEMOLISHED USABLE MATERIAL WILL BE HANDED OVER TO THE CONCERNED DEPARTMENT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE PROPOSED DESIGN OF PAVEMENT IS BASED ON ASSUMED WILL CONDUCT AND TO THE ENGINEER
- THE GEOMETRIC DESIGN IS BASED ON THE TOPOGRAPHIC SURVEY. HOWEVER, AT CONSTRUCTION STAGE, IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SURVEY AND ANY DISCREPANCY IF FOUND SHALL BE CORRECTED AND DESIGN MAY BE REVISED ACCORDINGLY.
- ALL PROFILE DRAWINGS SHALL BE READ IN CONJUNCTION WITH RELEVANT PLAN AND CROSS SECTIONAL DRAWINGS
- ALL EXISTING STRUCTURES, UTILITY POLES WHICH LIE IN THE PROPOSED CROSS SECTION, ARE REQUIRED TO BE DEMOLISHED/RELOCATED BY THE CONTRACTOR IN COORDINATION WITH THE CONCERNED UTILITY DEPARTMENT OR AS DIRECTED BY THE ENGINEER
- PAVEMENT WIDENING SHALL BE REQUIRED WHERE EXISTING PAVEMENT WIDTH IS LESS THAN THE WIDTH SHOWN ON THE TYPICAL CROSS SECTION OR SHOWN ELSEWHERE ON THE DRAWINGS.
- ALL DEFECTIVE PORTIONS OF SUB-GRADE GRANULAR SUB-BASE COURSE FAILURE OF THE EXISTING PAVEMENT AS DETERMINED BY THE ENGINEER SHALL BE REMOVED AND RELAYED AS PER DRAWINGS AND SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
- THE EXISTING MANHOLES LYING BELOW THE FINAL DESIGN LEVELS ARE REQUIRED TO BE RAISED AND MATCHED WITH FINAL DESIGN ELEVATION
- ACCESS TO RESIDENTIAL AREAS WITHIN THE CONSTRUCTION ZONE SHALL NOT BE BLOCKED BY THE CONTRACTOR AT ANY TIME ALL EXISTING ACCESSES WILL BE RETAINED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY TRAFFIC DIVERSIONS ON THE ROAD, CONSTRUCTION OF DETOUR, MAINTENANCE, SPRINKLING OF WATER, GRADING AND COMPACTION, TRAFFIC SAFETY DEVICES, BEACON LIGHTS WHEN AND WHERE REQUIRED, OR AS DIRECTED BY THE ENGINEER.
- GENERAL SPECIFICATIONS TO BE USED SHALL BE THE LATEST AVAILABLE EDITION OF STANDARD SPECIFICATIONS FOR ROAD - BRIDGE CONSTRUCTION PUBLISHED BY PUNJAB COMMUNICATION AND WORKS DEPARTMENT
- CLEANING AND MAINTENANCE OF GULLY GRATING CHAMBER IS THE RESPONSIBILITY OF THE CONTRACTOR
- GULLY GRATING CHAMBER ARE PROVIDED DUE TO ABSENCE OF DEDICATED INFRASTRUCTURE FOR SURFACE RUNOFF.




ABBREVIATIONS

HORIZONTAL / VERTICAL CURVES		
S.NO	DESCRIPTION	SYMBOL
1	STATION	STA
2	POINT OF INTERSECTION	PI
3	EASTING	E
4	NORTHING	N
5	ANGLE OF DEFLECTION	d
6	RADIUS	R
7	LENGTH OF TANGENT	T
8	LENGTH OF CIRCULAR CURVE	LC
9	EXTERNAL ORDINATE	E
10	DEGREE OF CURVE	D
11	RATE OF SUPER ELEVATION	SE
12	POINT OF COMMENCEMENT (CIRCULAR CURVE)	PC
13	POINT OF TERMINATION (CIRCULAR CURVE)	PT
14	VERTICAL POINT OF INTERSECTION	VPI
15	ELEVATION	EL
16	LENGTH OF HORIZONTAL VERTICAL CURVE	L
17	MIDDLE ORDINATE	M
18	NORMAL CROSSFALL	NC
19	REVERSE CROWN	RC
20	SUPER ELEVATION RUNOFF	SR
21	TANGENT RUNOUT	TR
22	POINT OF COMPOUND CURVATURE	PCC
23	POINT OF REVERSE CURVE	PRC
24	VERTICAL POINT OF CURVATURE	VPC
25	VERTICAL POINT OF TANGENCY	VPT
26	VERTICAL GRADIENT	G
27	MAXIMUM	MAX.
28	MINIMUM	MIN.
29	FINISHED ROAD LEVEL	FRL
30	NATURAL SURFACE LEVEL	NSL
31	HIGH FLOOD LEVEL	HFL
32	SHOULDER	SHLDR

LEGEND

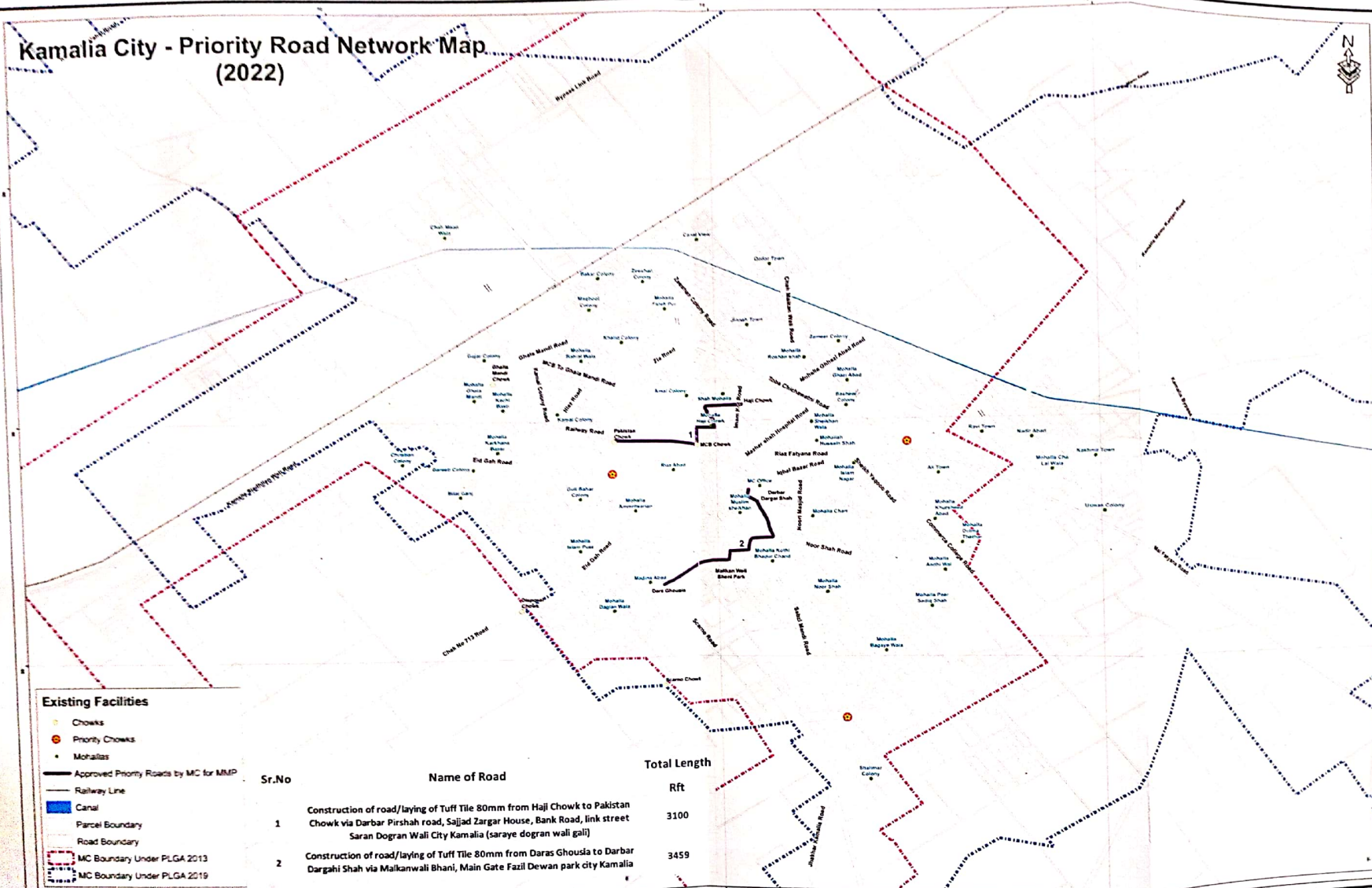
PROPOSED CENTERLINE	BUILDING	CENTER LINE	TUBEWELL
FRL	CANAL	ELECTRIC POLE	MANHOLE
NSL	DRAIN	PYLON	SIGN BOARD
EDGE OF TRAVELWAY	ROAD	LIGHT POLE	HAND PUMP
LANE	TRACK	TREE	OPTICAL FIBER CABLE
EDGE OF PAVED SHOULDER	PCC	RAILWAY LINE	MOSQUE
PROPOSED CARRIAGEWAY	TUFF TILE	TELEPHONE POLE	ELEVATION EL. 210.258
PROPOSED PAVERS	FENCE	FOOT PATH	GRAVEYARD
PROPOSED DRAIN	GREEN BELT	KARB STONE	
PROPOSED GULLY GRATING CHAMBER			

Drawing No. MMP-1075-PO3-KML-RD-GN-002
 Date: 06-10-2022
 Scale: 1:1200
 Prepared by: [Name]
 Checked by: [Name]
 Approved by: [Name]

 CENTRAL DESIGN CELL G-9, Phase-1, C-1, Quater F-1, Government Road, Lahore 54000, PUNJAB TEL: 37320000 FAX: 37320001 WWW.MMP.PUNJAB.GOV.PK	 GOVERNMENT OF PUNJAB  Punjab Municipal Development Fund Company (PMDFC)	Funding Agency	Rev.	Date	Description	Checked	Approved	Title	Designed: Sadia Sharafat Drawn: M.Ali Checked: Sajad Anwar Approved: Ihsan ul Haq Qamar Scale:
		WORLD BANK Project Punjab Cities Program (PCP) Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab (Package-1)	0	06-10-2022		SA	IH	GENERAL NOTES	
								Drawing No.	MMP-1075-PO3-KML-RD-GN-002

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Kamalia City - Priority Road Network Map (2022)



Existing Facilities

- Chowks
- Priority Chowks
- Mohallas
- Approved Priority Roads by MC for MMP
- Railway Line
- Canal
- Parcel Boundary
- Road Boundary
- MC Boundary Under PLGA 2013
- MC Boundary Under PLGA 2019

Sr.No	Name of Road	Total Length Rft
1	Construction of road/laying of Tuff Tile 80mm from Haji Chowk to Pakistan Chowk via Darbar Pirshah road, Sajjad Zargar House, Bank Road, link street Saran Dogran Wali City Kamalia (saraye dogran wali gali)	3100
2	Construction of road/laying of Tuff Tile 80mm from Daras Ghousia to Darbar Dargahi Shah via Malkhanwali Bhani, Main Gate Fazil Dewan park city Kamalia	3459

Consultant
MMP
 MPP Pakistan (P) Pvt. Ltd.
 CENTRAL DESIGN CELL
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 27th Avenue, Road 23/24,
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Client

GOVERNMENT OF PUNJAB
 Punjab Municipal Development
 Fund Company
 (PMDFC)

Funding Agency
WORLD BANK
 Project
 Punjab Cities Program (PCP)
 Detailed Design of Infrastructure
 Sub-Projects, Sectoral Planning & Resident
 Supervision in 16 Cities of Punjab (Package-3)

Rev	Date	Description	Checked	Approved	Title
0	06-10-2022		SA	IH	LOCATION MAP OF 2 ROADS

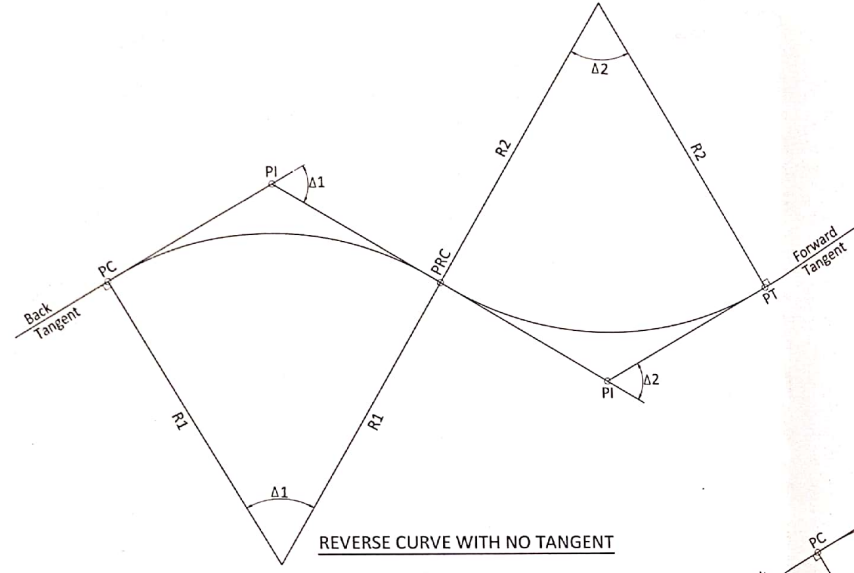
Drawing No.
 MMP-1075-PO3-AML-RD-GN-003

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Drawn	M.Ali
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Approved	Insan ul Haq Qamar
Scale	As Shown
Rev No	

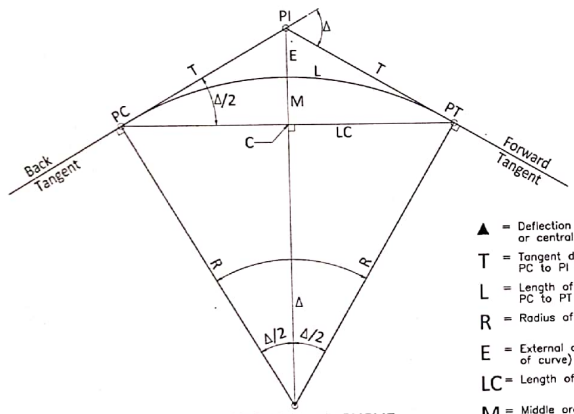
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 Date: 06-10-2022
 Scale: As Shown
 Project: Punjab Cities Program (PCP) - Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab (Package-3)

Drawing file path: \\mmp\kumar\A113-003\WORKING\Package 03\KAMUJA\GENERAL DRAWINGS\MMP-1075-PO3-KML-RD-GK-004.dwg
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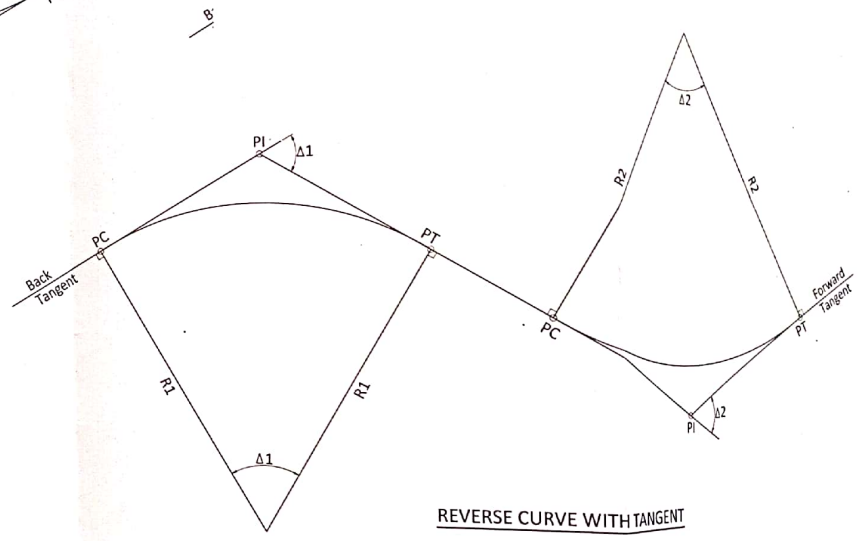
REVERSE CURVE WITH NO TANGENT



SIMPLE CIRCULAR CURVE


- ▲ = Deflection angle between tangents or central angle, degrees
- T = Tangent distance = distance from PC to PI = distance from PI to PT
- L = Length of curve = distance from PC to PT along curve
- R = Radius of curve, (r)
- E = External distance (PI to mid-point of curve)
- LC = Length of long chord: PC to PT
- M = Middle ordinate (mid-point of arc to mid-point of long chord)
- C = Mid-point of long chord

- PC = Point of Curvature (Beginning of Curve)
- PT = Point of Tangency (End of Curve)
- PI = Point of Intersection
- PRC = Point of Reverse Curvature
- R1, R2 = Radius of Curve
- Δ1, Δ2 = Deflection Angle




REVERSE CURVE WITH TANGENT

Consultant



ENTR Pakistans (Pvt) Ltd.
 CENTRAL DESIGN CELL
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 27-C, Opposite Feroz, Lahore
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 ✉ info@mmp.com.pk
 www.mmp.com.pk

Client



GOVERNMENT OF PUNJAB
 Punjab Municipal Development
 Fund Company
 (PMDFC)

Funding Agency

WORLD BANK

Project

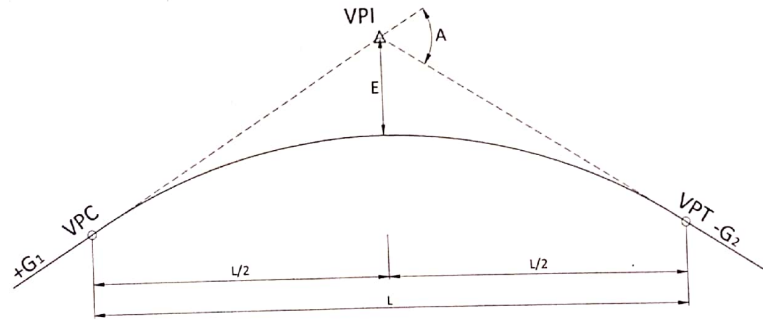
Punjab Cities Program (PCP).
 Detailed Design of Infrastructure
 Sub-Projects, Sectoral Planning & Resident
 Supervision in 16 Cities of Punjab(Package-1)

Rev.	Date	Description	Checked	Approved	Title
0	06-10-2022		SA	IH	HORIZONTAL CURVE ELEMENTS

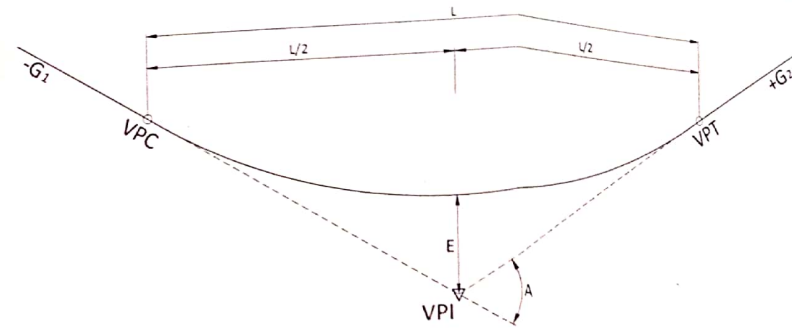
Designed	Sadia Sharafat
Drawn	M.Ali
Checked	Sajjad Anwar
Approved	Imran ul Haq Qamar
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Rev No	

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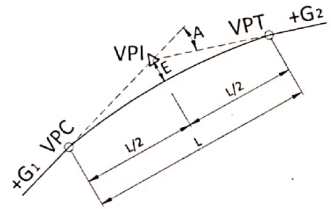
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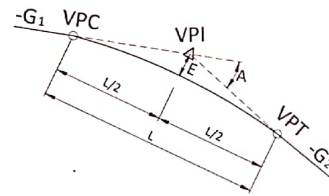
CREST VERTICAL CURVE (TYPE-I)



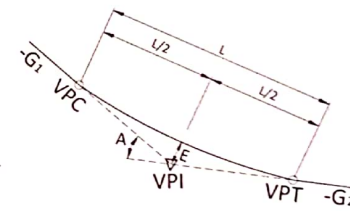
SAG VERTICAL CURVE (TYPE-I)



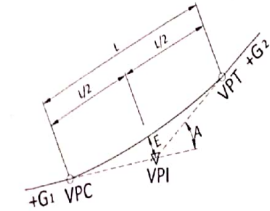
CREST VERTICAL CURVE (TYPE-II)



CREST VERTICAL CURVE (TYPE-III)



SAG VERTICAL CURVE (TYPE-II)



SAG VERTICAL CURVE (TYPE-III)

VPC = Vertical Point of Curvature
 VPT = Vertical Point of Tangency
 VPI = Vertical Point of Intersection
 G_1, G_2 = Grades in Percent (%)

E = External Distance, Vertical Distance
 Between VPI and Midpoint of the
 Curve, (ft)
 A = Algebraic Difference in Grades
 $(G_2 - G_1)\%$
 L = Length of Vertical Curve, (ft)

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 User and Plot Date: Asghar - Thu, 06 Oct 2022 - 11:27am



Funding Agency: **WORLD BANK**

Project: Punjab Cities Program (PCP) Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab(Package-1)

Rev.	Date
0	06-10-2022

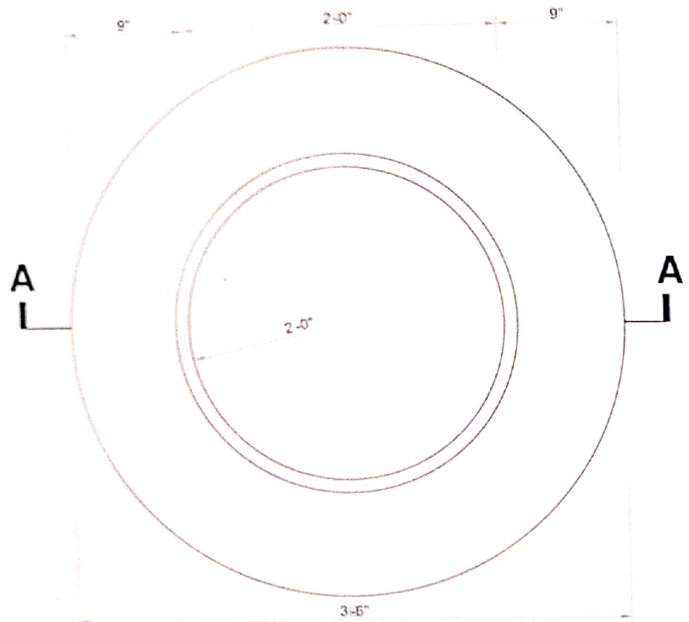
Description	Checked	Approved	Title
	SA	IH	

VERTICAL CURVE ELEMENTS

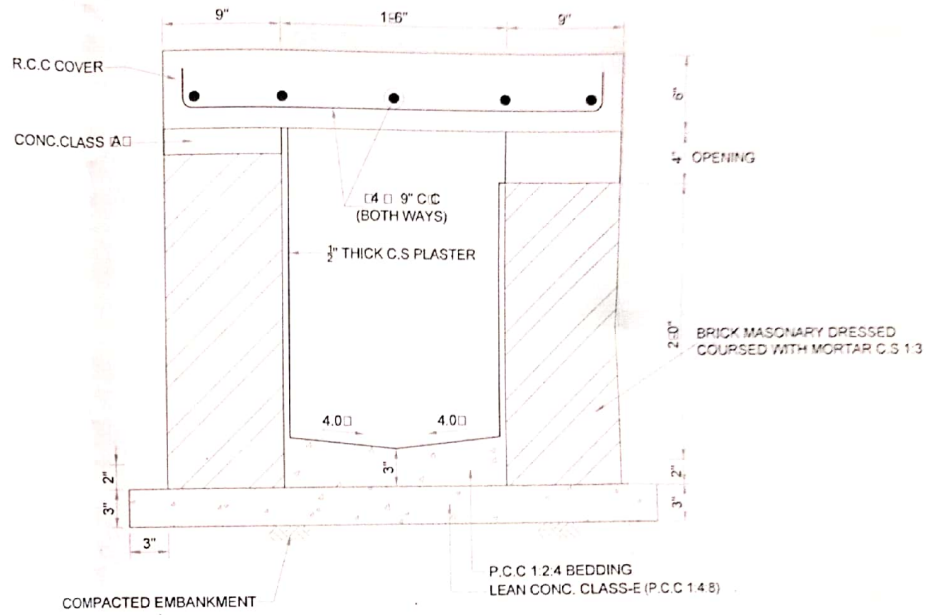
Drawing No. MMP-1075-PO3-KML-RD-SN-005

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Drawn	M.Ah
Checked	Sajjad Anwar
Approved	Imran ul Haq Qamar
Scale	AS SHOWN
Rev No	

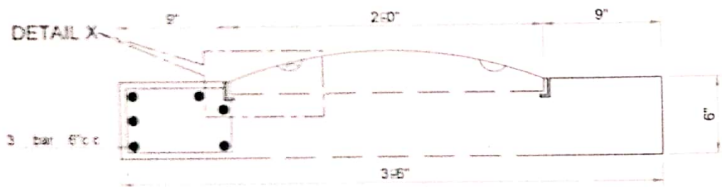
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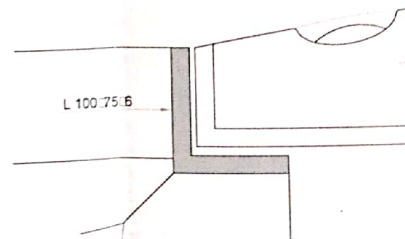
PLAN OF MANHOLE COLLAR



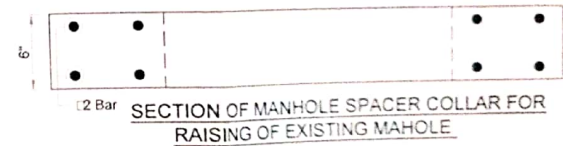
TYPICAL ROAD SIDE DRAIN DETAIL



SECTION OF MANHOLE COLLAR
SECTION A-A



DETAIL X
RAISING OF EXISTING MANHOLE



SECTION OF MANHOLE SPACER COLLAR FOR
RAISING OF EXISTING MAHOLE

Drawing file path: \\mmp\work\1075-KM\RD-GN-008.dwg
 User: M. Ali
 Date: 06-10-2022
 Time: 11:28am

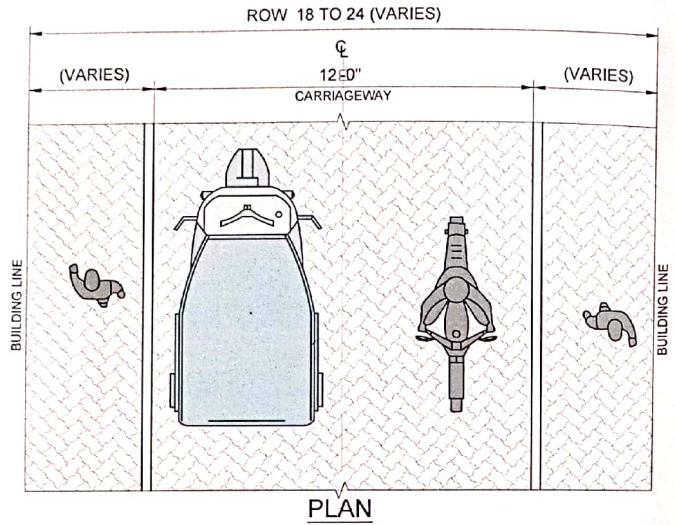
Consultant MMP Municipal Management Corporation 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.	Client GOVERNMENT OF PUNJAB Punjab Municipal Development Fund Company (PMDFC)	Funding Agency WORLD BANK	Rev. 0	Date 06-10-2022	Description	Checked SA	Approved IH	Title TYPICAL ROAD SIDE DRAIN AND MANHOLE DETAILS KAMALIA	Designed Sarfar Dhanrajat
			Project Punjab Cities Program (PCP) Detailed Design of Infrastructure Sub-Projects: Sectoral Planning & Resident Supervision in 16 Cities of Punjab(Package-1)						Drawing No. MMP-1075-PO3-KM-RD-GN-008
									Checked Sajad Anwar
									Approved Ihsan ul Haq Damar
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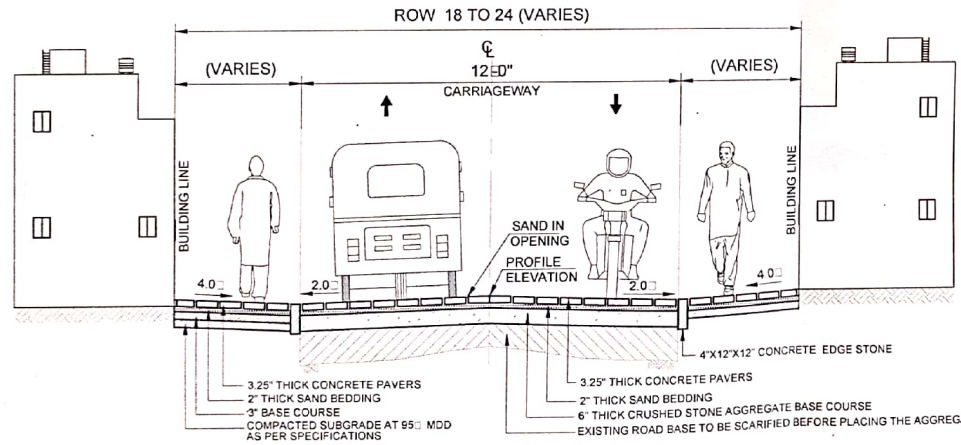


Typical Roadway Sections

MMP



PLAN



TYPICAL ROADWAY SECTION
RESURFACING WITH CONCRETE PAVERS
DARAS GHOSIA TO DARBAR DARGAHI SHAH VIA MALKANWALI
BHANI, MAIN GATE FAZIL DWAN PARK CITY

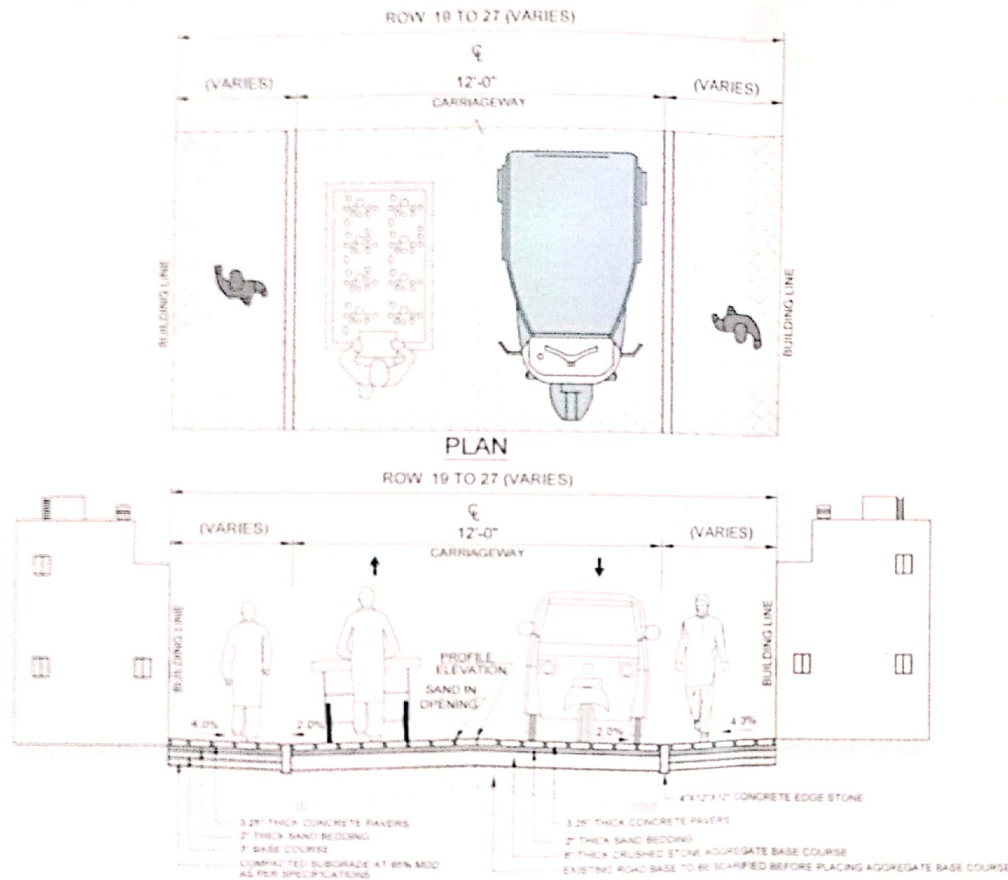
NOTES:-

1. ALL DIMENSIONS ARE IN FEET EXCEPT SHOWN OTHERWISE.
2. EXISTING ASPHALT SURFACE TO BE RE MOVED.
3. EXISTING BASE WILL BE SCARIFIED AND NEW CRUSHED STONE AGGREGATE BASE COURSE WILL BE PLACED AND COMPACTED AS PER SPECIFICATION.
4. THE 4% SLOPE SHOWN OUT SIDE THE CARRIAGEWAY WILL BE REVERSED TO 2% AT APPROACH STREETS/ROADS.

Drawing file path & name: Z:\M2D_A\3 -00\WORKING\Package 03\KAMALIA\TYPICAL ROAD SECTION\MMP-1075-PO3-KML-RD-TX-007.dwg
 User and Plot Date: Mjfor - Thu, 08 Oct 2022 - 11:28am

Consultant MMP MBI Pakistan (Pvt) Ltd. CENTRAL DESIGN CELL 2nd Floor, C-11 Building, F-7/Engineers Road, Lahore ☎ 992-9629252-7 ☎ 992-9629258 ✉ cdc.mmp@mmpconsultant.com http://www.mmpconsultant.com	Client GOVERNMENT OF PUNJAB Punjab Municipal Development Fund Company (PMDFC)	Funding Agency WORLD BANK Project Punjab Cities Program (PCP) Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab(Package-1)	Rev.	Date	Description	Checked	Approved	Title TYPICAL ROADWAY SECTION KAMALIA RESURFACING WITH CONCRETE PAVERS DARAS GHOSIA TO DARBAR DARGAHI SHAH VIA MALKANWALI BHANI, MAIN GATE FAZIL DWAN PARK CITY	Designed	Sadia Sharafat
			0	06-10-2022		SA	IH		Drawn	M.Ali
								Approved	Sajjad Anwar	
								Scale	Insan ul Haq Qamar	
								Rev No:	AS SHOWN	
								Drawing No.	MMP-1075-PO3-KML-RD-TX-007	

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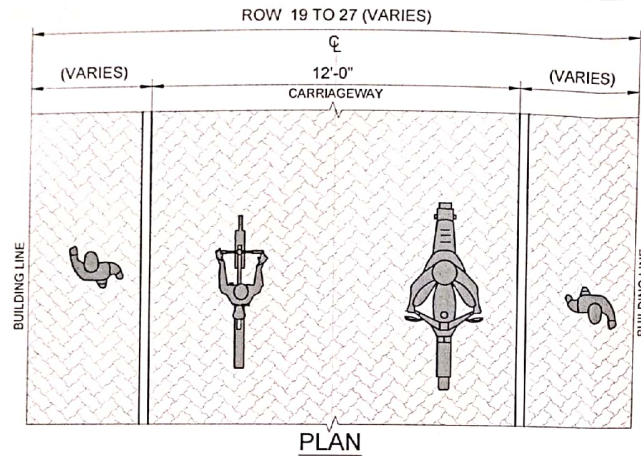
TYPICAL ROADWAY SECTION
RESURFACING WITH CONCRETE PAVERS
HAJI CHOWK TO PAKISTAN CHOWK VIA DARBAR PIRSHAH ROAD
SAJJAD ZARGAR HOUSE BANK ROAD
 STA 0+000 TO STA 0+055
 STA 0+550 TO STA 1+055
 STA 2+155 TO STA 3+102.42

NOTES -

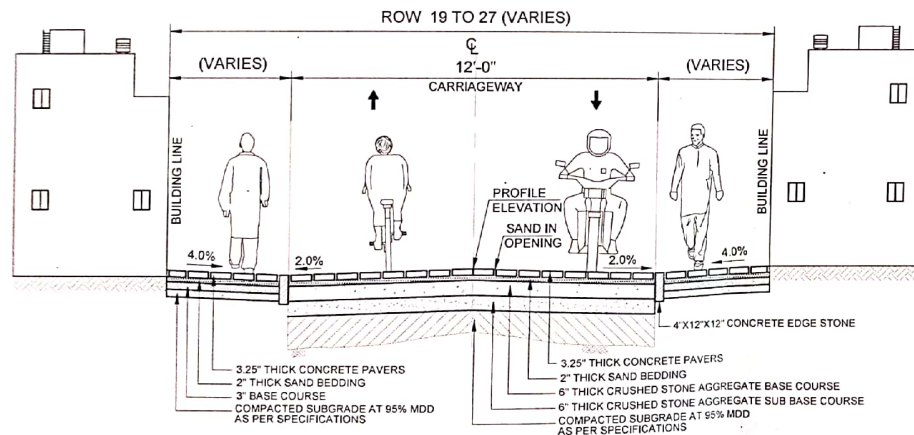
1. ALL DIMENSIONS ARE IN FEET EXCEPT SHOWN OTHERWISE.
2. EXISTING ASPHALT SURFACE TO BE REMOVED.
3. EXISTING BASE WILL BE SCARIFIED AND NEW CRUSHED STONE AGGREGATE BASE COURSE WILL BE PLACED AND COMPACTED AS PER SPECIFICATION.
4. THE 4% SLOPE SHOWN OUTSIDE THE CARRIAGEWAY WILL BE REVERSED TO 2% AT APPROACH STREETS/ROADS.

<p>MMP 3000 Bahawalpur Road</p>	<p>GOVERNMENT OF PUNJAB</p> <p>Punjab Municipal Development Fund Company (PMDFC)</p>	Funding Agency WORLD BANK	Rev	Date	Description	Checked	Approved	By	TYPICAL ROADWAY SECTION KAMALJA RESURFACING WITH CONCRETE PAVERS HAJI CHOWK TO PAKISTAN CHOWK VIA DARBAR PIRSHAH ROAD SAJJAD ZARGAR HOUSE BANK ROAD STA 0+000 TO STA 3+102.42 STA 0+550 TO STA 1+055 STA 2+155 TO STA 3+102.42	Designed M.A.	Scale AS SHOWN
			0	10/10/2022							
Project Punjab Cities Program (PCP) Detailed Design of Infrastructure Sub-Projects: Sectoral Planning & Resident Supervision in 15 Cities of Punjab/Package-3									Drawing No. MMP-1075-PCP-Sub-10-TA-008	Date Issued	

Drawing No. MMP-1075-PCP-Sub-10-TA-008
 Date Issued: 10/10/2022
 Scale: AS SHOWN
 Project: Punjab Cities Program (PCP) - Detailed Design of Infrastructure - Sub-Projects: Sectoral Planning & Resident Supervision in 15 Cities of Punjab/Package-3



PLAN






TYPICAL ROADWAY SECTION
NEW CONSTRUCTION WITH CONCRETE PAVERS
HAJI CHOWK TO PAKISTAN CHOWK VIA DARBAR PIRSHAH ROAD
SAJJAD ZARGAR HOUSE BANK ROAD
STA 0+055 TO STA 0+550
STA 1+055 TO STA 2+155

NOTES:-

1. ALL DIMENSIONS ARE IN FEET EXCEPT WHERE OTHERWISE MENTIONED.
2. THE EXISTING GROUND SHALL BE CLEARED/GRUBBED UP TO A DEPTH OF 6" WHERE DIRECTED BY THE ENGINEER, THE CLEARED/GRUBBED WATERED AND COMPACTED TO THE SPECIFIED DENSITY AS PER SPECIFICATIONS.
3. THE 4% SLOPE SHOWN OUT SIDE THE CARRIAGEWAY WILL BE REVERSED TO 2% AT APPROACH STREETS/ROADS.

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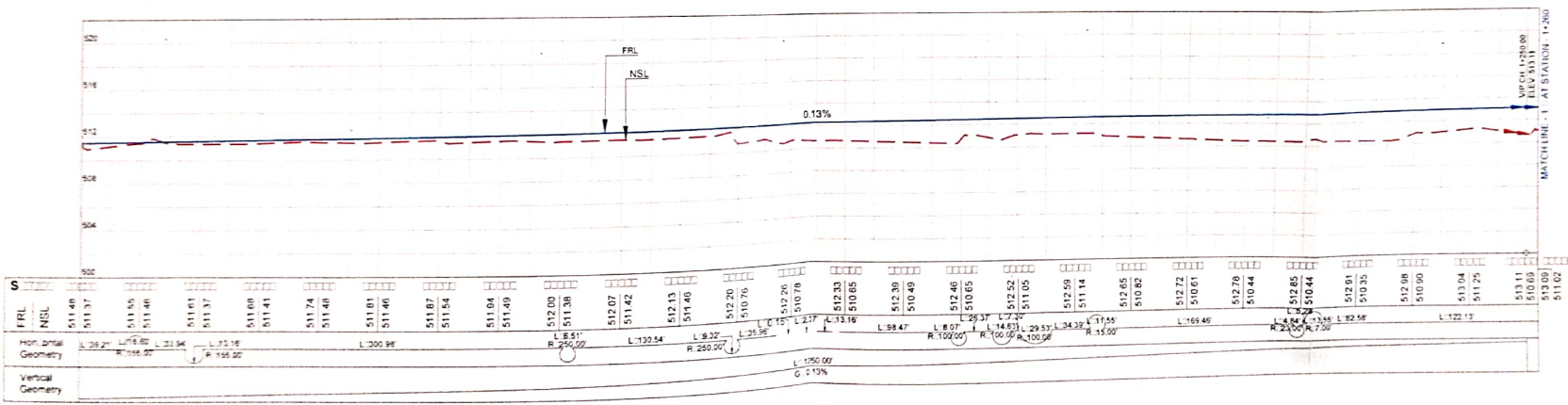
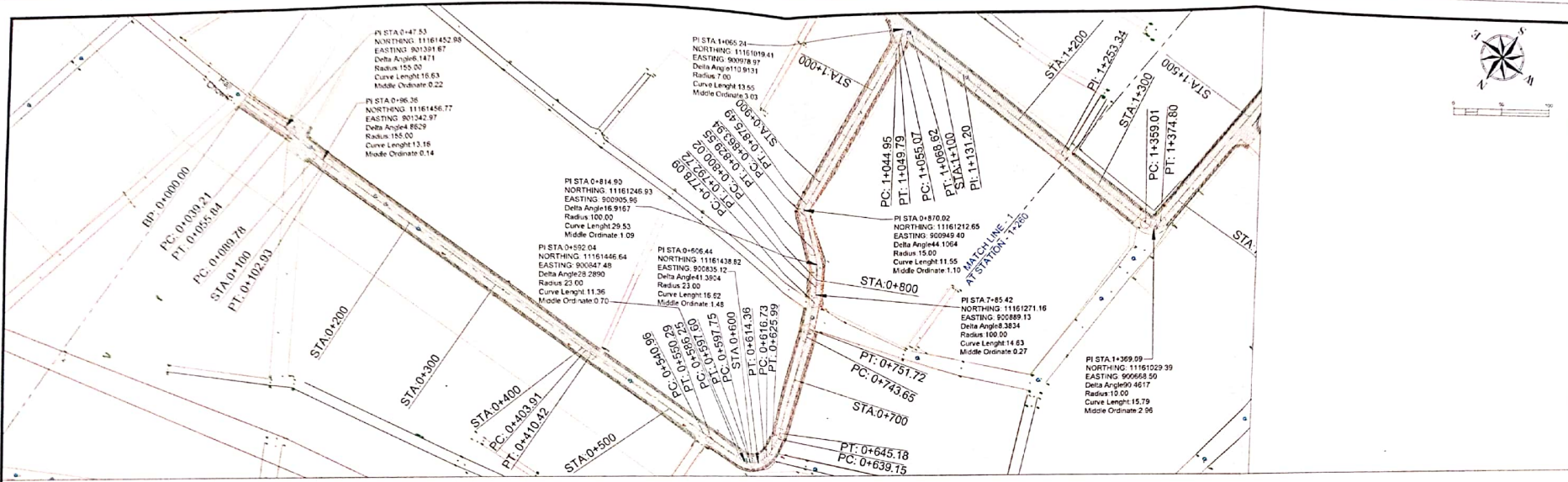
Consultant  M/M Pakistan (Pvt) Ltd. CENTRAL DESIGN CELL 2nd floor, C13 Building, 21 Chakrala Road Lahore PAKISTAN TEL: 37222527 FAX: 37222528 E-MAIL: info@mmp.com.pk WWW: www.mmp.com.pk	Client  GOVERNMENT OF PUNJAB  Punjab Municipal Development Fund Company (PMDFC)	Funding Agency WORLD BANK Project Punjab Cities Program (PCP) Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab(Package-3)	Rev.	Date	Description	Checked	Approved	Title TYPICAL ROADWAY SECTION KAMALIA RESURFACING WITH CONCRETE PAVERS HAJI CHOWK TO PAKISTAN CHOWK,VIA DARBAR PIRSHAH ROAD SAJJAD ZARGAR HOUSE BANK ROAD STA 0+055 TO STA 0+550 STA 1+055 TO STA 2+155	Designed Sadia Shara'fat	
			0	10-10-2022		SA	IH			Drawn M.Ali Checked Sajjad Anwar Approved Ihsan ul Haq Qamar Scale AS SHOWN
Drawing No. MMP-1075-PO3-KML-RD-TX-008								Rev No.		

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Plan and Profile Drawings

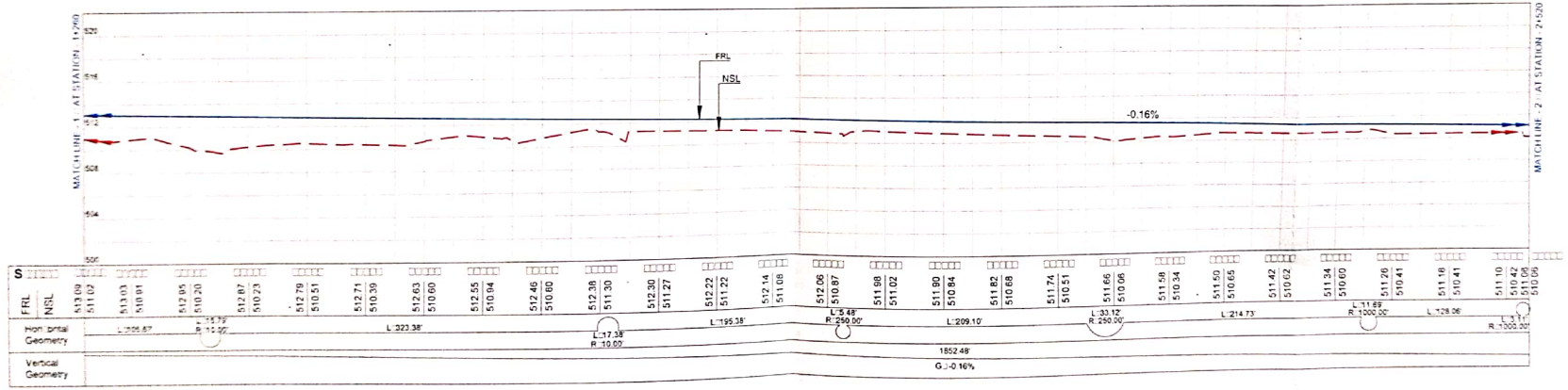
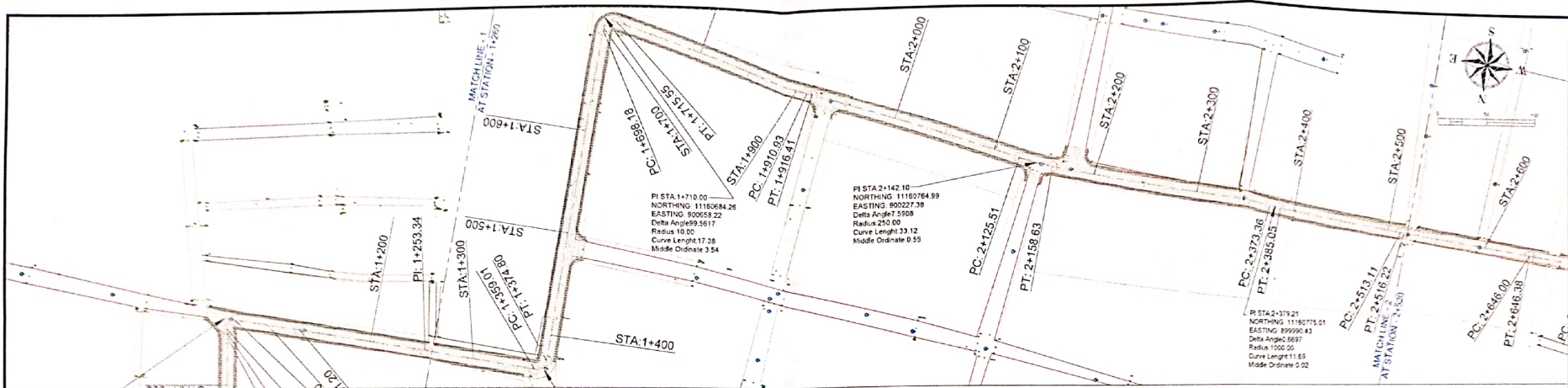
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			Drawn M.Ali Checked Sajad Anwar Approved Insan ul Haq Qamar Scale H: 1" = 100' V: 1" = 10' Rev No					

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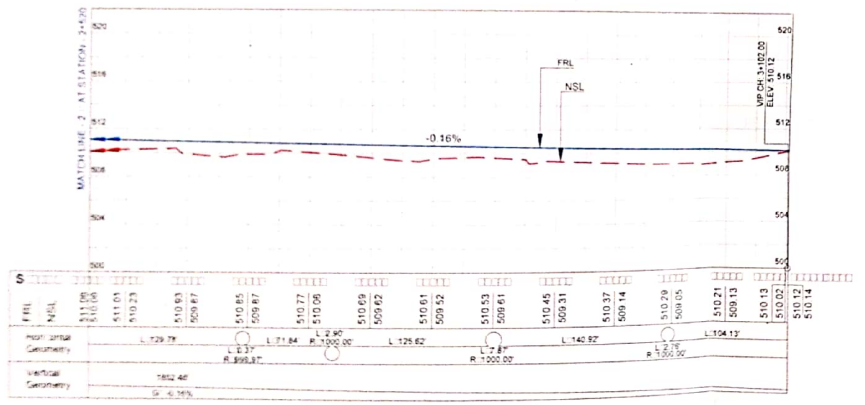
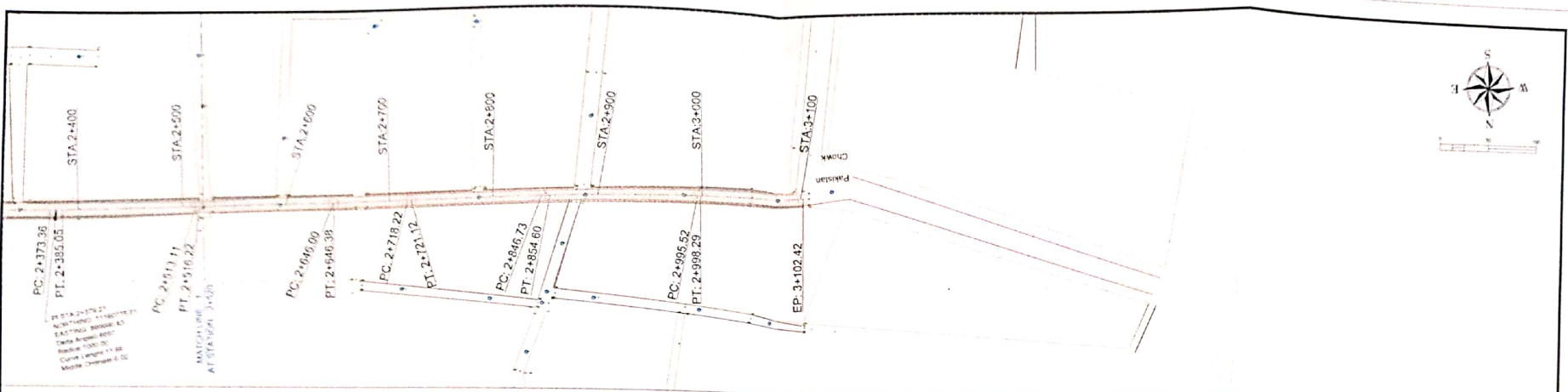
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Drawing No. 1017 & name: A:\MPPA\A1\2 - CAD WORKING\WORKSPACE\STANDARD PLAN & PROFILE\MPP-1075-PQ3-AML-RD-PP-02.DWG (10.06.2022, 11:11am)
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			Rev. 	Date 	Description 	Checked 	Approved 		Drawn M.Ali
Drawing No. MPP-1075-PQ3-AML-RD-PP-002								Checked Sajad Anwar	
Approved Ihsan ul Haq Qamar								Scale H=1"=100' V=1"=10'	
Rev No.									

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Drawing No: MMP-1075-PP-03-KML-RD-PP-003
 Date: 06-10-2022
 Scale: H: 1" = 100' V: 1" = 10'
 Project: Punjab Cites Program (PCP) - Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab (Package-1)

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 Punjab Municipal Development
 Fund Company
 (PMDFC)

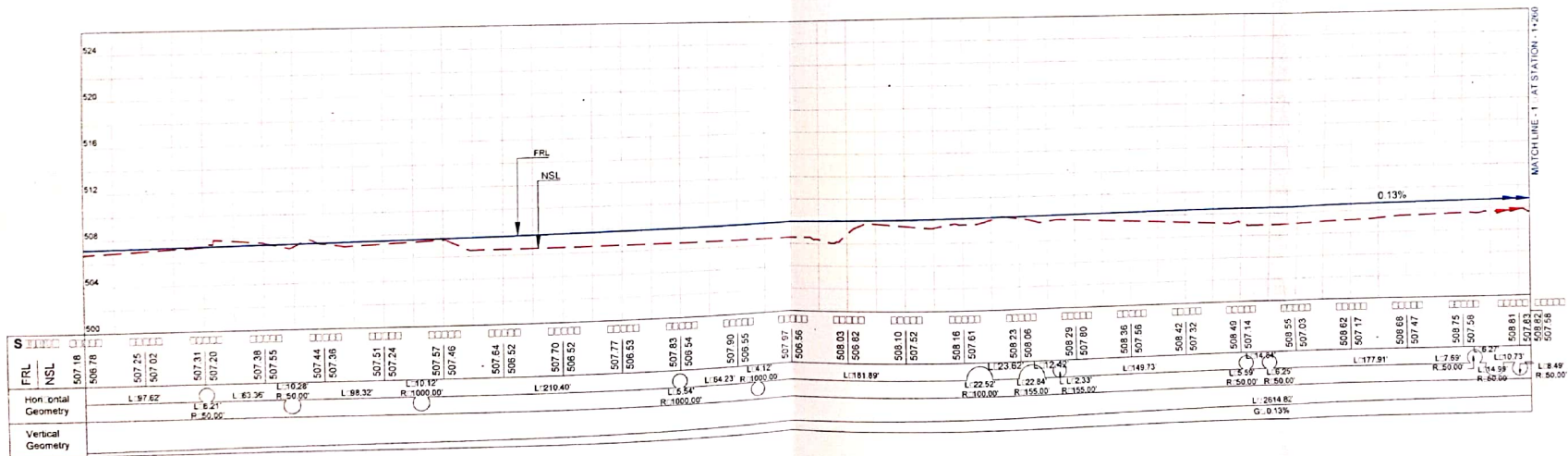
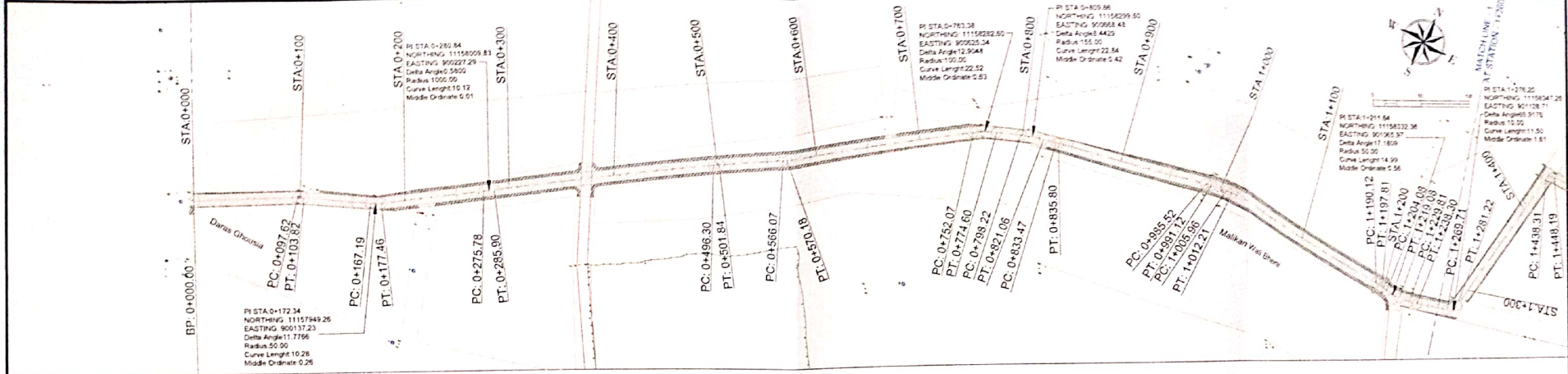
Funding Agency
WORLD BANK
Project
 Punjab Cites Program (PCP)
 Detailed Design of Infrastructure
 Sub-Projects, Sectoral Planning & Resident
 Supervision in 16 Cities of Punjab (Package-1)

Rev	Date	Description	Checked	Approved
0	06-10-2022		SA	IH

Title
Haji Chowk Road
PLAN AND PROFILE
(STA 2+520 TO STA 3+102.415)
(SHEET 03 OF 03)
Drawing No.
 MMP-1075-PP-03-KML-RD-PP-003

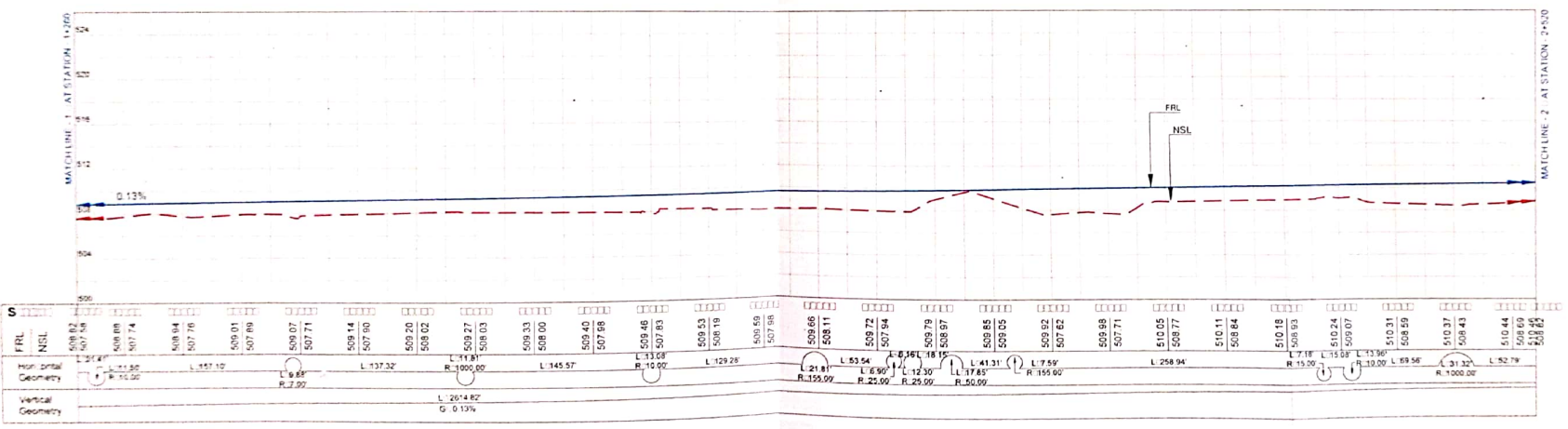
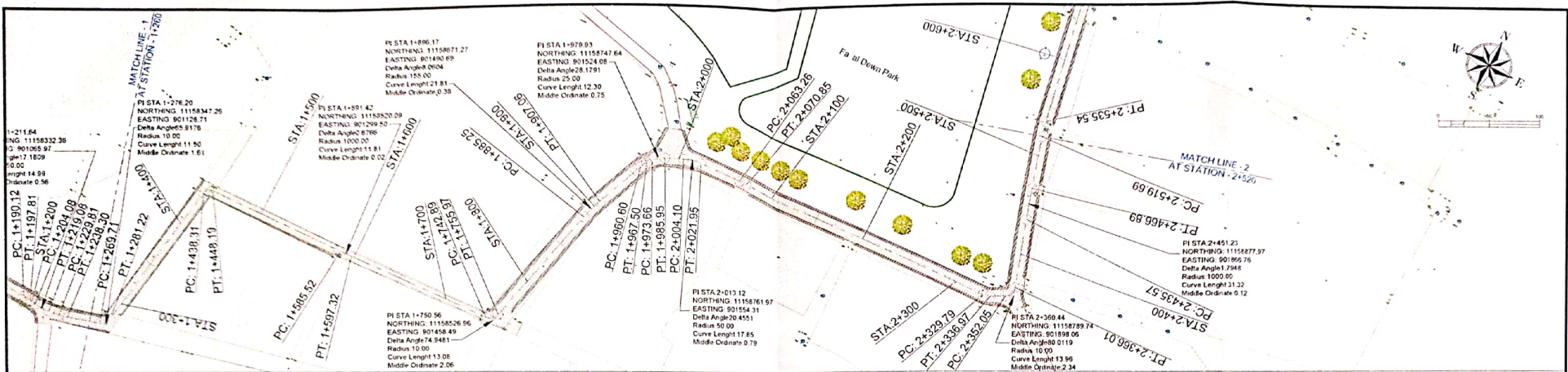
Designed	Sadia Sharafat
Drawn	M.Ali
Checked	Sajad Anwar
Approved	Ihsan ul Haq Qamar
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			0	06-10-2022			SA		IH	Drawn
Project Punjab Cities Program (PCP) Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab(Package-1)								Checked	Sajjad Anwar	
								Approved	Ihsan ul Haq Qamar	
								Scale	H=1" : 100' V=1" : 10'	
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								Drawing No.	MMP-1075-PO3-KML-RD-PP-004	

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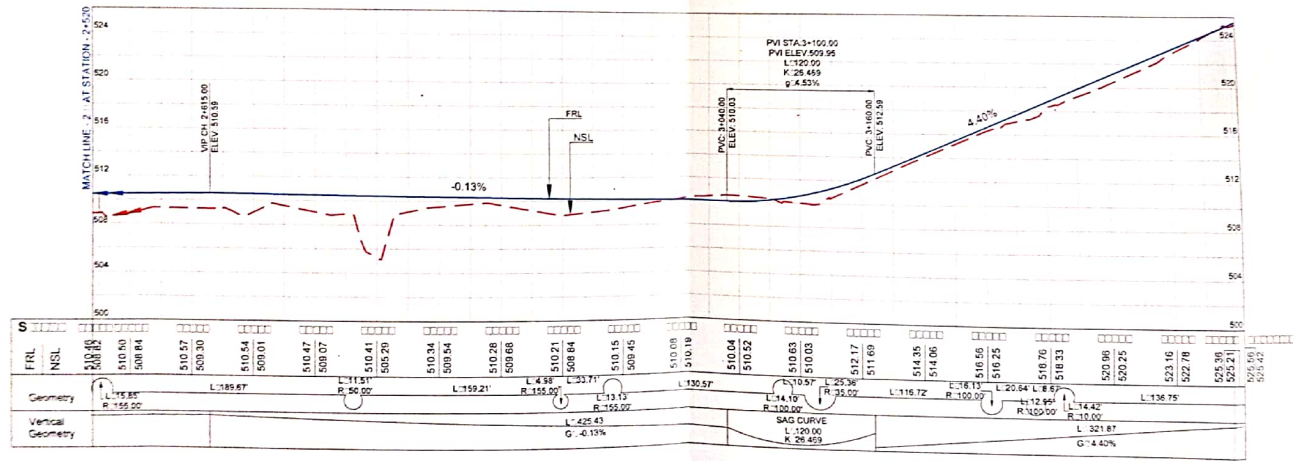
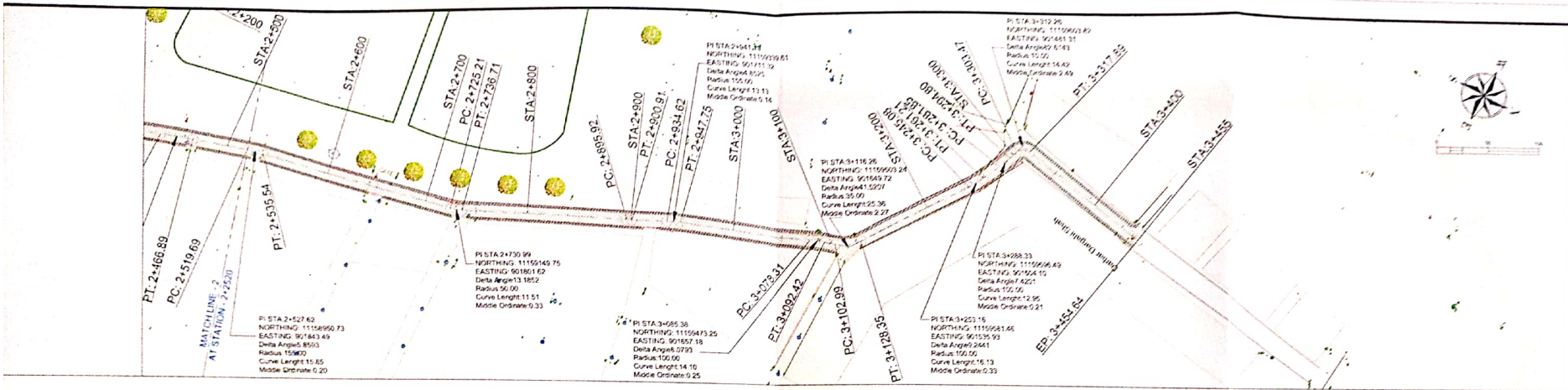


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507.89	507.74	507.74		R 7.90
507.84	507.76	507.76		L 137.32
507.81	507.89	507.89		R 1000.00
507.71	507.07	507.07		L 11.81
507.14	507.90	507.90		R 1000.00
507.20	508.02	508.02		L 145.57
507.03	509.27	509.27		R 10.00
508.33	508.00	508.00		L 129.28
507.68	509.40	509.40		R 10.00
507.83	509.46	509.46		L 21.81
508.53	508.19	508.19		R 159.09
507.98	508.66	508.66		L 53.54
507.84	508.11	508.11		R 22.00
507.79	509.79	509.79		L 12.30
508.57	508.57	508.57		R 50.00
509.65	509.05	509.05		L 41.31
509.52	509.05	509.05		R 155.00
507.62	507.62	507.62		L 7.59
508.95	507.71	507.71		R 1000.00
510.05	508.77	508.77		L 258.94
510.11	508.64	508.64		R 15.30
510.18	508.93	508.93		L 7.18
510.24	510.24	510.24		R 10.00
509.07	509.07	509.07		L 13.96
510.31	508.59	508.59		R 69.56
510.37	508.43	508.43		L 31.22
510.44	508.69	508.69		R 1000.00
510.44	508.69	508.69		L 52.79

Consultant 	Client GOVERNMENT OF PUNJAB Punjab Municipal Development Fund Company (PMDFC)	Funding Agency WORLD BANK	Project Punjab Cities Program (PCP) Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab(Package-1)	Rev. 0	Date 06-10-2022	Description	Checked SA	Approved IH	Title DARAS GHOSHIA ROAD PLAN AND PROFILE (STA 1+260 TO STA 2+520) (SHEET 02 OF 03)	Designed Sadia Sharafat
									Checked Sajad Anwar	
									Approved Ihsan ul Haq Qamar	
									Scale H: 1" = 100' V: 1" = 10'	
									Rev No	
Drawing No. MMP-1075-FO3-KML-RD-PP-005										

Drawing No. Path & Profile: (MMP) KML-RD-PP-005 (Package-1) & Project: (MMP) KML-RD-PP-005 (Package-1)
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			Drawing No. MMP-1075-PO3-NML-RD-PP-008		Scale H: 1" = 100' V: 1" = 10'	Rev No.			

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