GOVERNMENT OF THE PUNJAB

PC-II

Perfoma for Preparation of Proposal for Conducting Feasibilty Study/Survey

Name of the proposed Study/Survey: Provision of Sewerage & Storm Water Drainage Facilities in Punjab

Date of Preparation of PC-II: 13th December, 2024

1. NAME OF THE PROJECT

Provision of Sewerage & Storm Water Drainage Facilities in Punjab

i. Commencement Date:	02nd December, 2024
ii. Completion Date:	01st November, 2025
iii. Total Gestation Period:	12 Month(s)

2. LOCATION OF THE PROJECT

2.1. DISTRICT(S)

I. ATTOCK, BAHAWALNAGAR, BAHAWALPUR, BHAKKAR, CHAKWAL, CHINIOT, DERA GHAZI KHAN, FAISALABAD, GUJRANWALA, GUJRAT, KASUR, KHANEWAL, KHUSHAB, LAYYAH, LODHRAN, MANDI BAHAUDDIN, MIANWALI, MULTAN, MUZAFFARGARH, NANKANA SAHIB, NAROWAL, OKARA, PAKPATTAN, RAHIM YAR KHAN, RAJANPUR, RAWALPINDI, SAHIWAL, SARGODHA, SHEIKHUPURA, SIALKOT, TOBA TEK SINGH, VEHARI

2.2. TEHSIL(S)

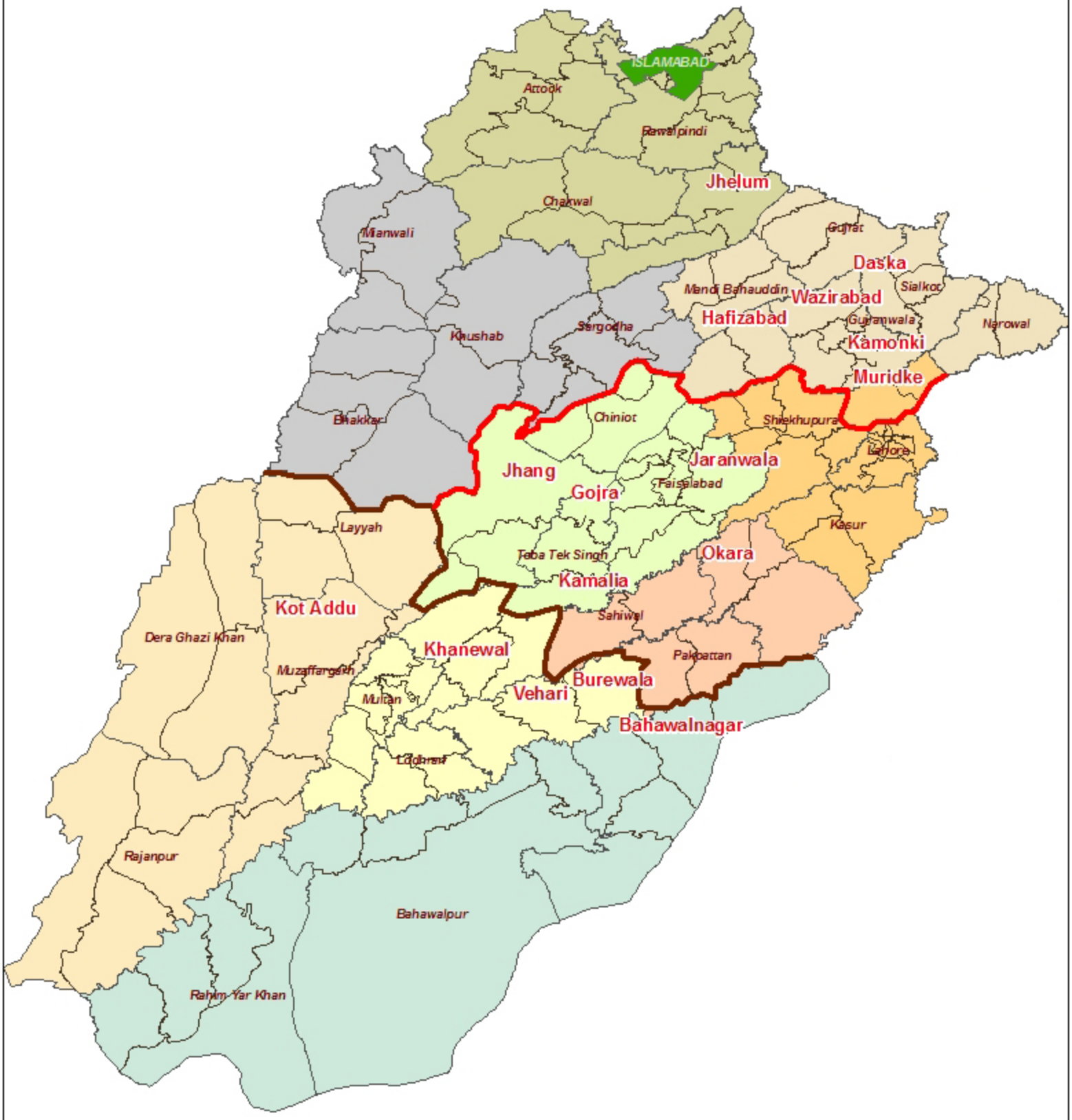
I. AHMADPUR EAST, ARIFWALA, ATTOCK, BHAKKAR, BHALWAL, CHAKWAL, CHICHAWATNI, CHINIOT, CHISHTIAN, DEPALPUR, DERA GHAZI KHAN, FEROZEWALA, GUJAR KHAN, GUJRANWALA SADDAR, HAROONABAD, HASILPUR, JAMPUR, JATOI, KASUR, KHANPUR, KHUSHAB, KOT RADHA KISHAN, LAYYAH, LODHRAN, MAILSI, MIAN CHANNU, MIANWALI, MUZAFFARGARH, NAROWAL, PAKPATTAN, PASRUR, PATTOKI, RAHIM YAR KHAN, RAJANPUR, RENALA KHURD, SADIQABAD, SAMBRIAL, SAMMUNDRI, SANGLA HILL, SHAKARGARH, SHEIKHUPURA, SHUJABAD, TAUNSA, TOBA TEK SINGH

1. LOCATION:

There are 78 cities (**Annexure-A**) having population more than 100,000 and population of 115 cities ranges from 25,000 to 100,000 (**Annexure-B**). Five (05) big cities of the province are served by WASAs. There are 16 cities which are benefited from World Bank funded Punjab Cities Program for provision of municipal services including sewerage and storm water drainage. However, due to funding constraint some of the cities still require investment in this sector to bring these facilities to cover the leftover areas. Similar is the situation in the PICIIP project cities.

Under the proposed study, about 50 intermediate cities of the province shall be selected, in consultation with Government of the Punjab as Phase-I. The remaining cities shall be taken up after successful completion of the feasibility studies under taken in Phase-I.

Punjab Location Map



Annexure-A

Cities having population between more than100K

S. No	DISTRICT	TEHSIL/ CITY	POPULATION 2023	STATUS
1	Lahore	Lahore Tehsil	13,004,135	WASA
2	Faisalabad	Faisalabad City Tehsil	3,691,999	WASA
3	Gujranwala	Gujranwala City Tehsil	2,511,118	WASA
4	Rawalpindi	Rawalpindi Tehsil	2,284,014	WASA/Dream I
5	Multan	Multan City Tehsil	2,169,915	WASA
6	Sialkot	Sialkot Tehsil	835,337	PICIIP
7	Bahawalpur	Bahawalpur City Tehsil	815,202	Dream I
8	Jhang	Jhang Tehsil	606,533	PCP
9	Sheikhupura	Sheikhupura Tehsil	591,424	Proposed City
10	Gujrat	Gujrat Tehsil	574,240	Proposed City
11	Sahiwal	Sahiwal Tehsil	538,344	PICIIP
12	Okara	Okara Tehsil	533,693	PCP
13	Rahim Yar Khan	Rahim Yar Khan Tehsil	519,261	Proposed City
14	Kasur	Kasur Tehsil	510,875	Proposed City
15	Dera Ghazi Khan	Dera Ghazi Khan Tehsil	494,464	Proposed City
16	Vehari	Burewala Tehsil	361,664	PCP
17	Hafizabad	Hafizabad Tehsil	318,621	PCP
18	Chiniot	Chiniot Tehsil	318,165	Proposed City
19	Gujranwala	Kamoke Tehsil	292,023	PCP
20	Jhelum	Jhelum Tehsil	291,022	PCP
21	Khanewal	Khanewal Tehsil	281,890	PCP
22	Rahim Yar Khan	Sadiqabad Tehsil	274,210	Proposed City
23	Sheikhupura	Muridke Tehsil	254,291	PCP
24	Rahim Yar Khan	Khanpur Tehsil	247,170	Proposed City
25	Bahawalnagar	Bahawalnagar Tehsil	241,873	PCP
26	Muzaffargarh	Muzaffargarh Tehsil	235,541	Proposed City
27	Mandi Bahauddin	Mandi Bahauddin Tehsil	232,361	Proposed City
28	Sialkot	Daska Tehsil	228,626	PCP
29	Pakpattan	Pakpattan Tehsil	221,280	Proposed City
30	Chakwal	Chakwal Tehsil	218,356	Proposed City
3831	Toba Tek Singh	Gojra Tehsil	214,349	PCP
32	Vehari	Vehari Tehsil	210,288	PCP
33	Bahawalpur	Ahmadpur East Tehsil	196,618	Proposed City

34	Bahawalnagar	Chishtian Tehsil	192,403	Proposed City
35	Faisalabad	Sammundri Tehsil	186,371	Proposed City
36	Sheikhupura	Ferozewala Tehsil	177,238	Proposed City
37	Faisalabad	Jaranwala Tehsil	170,872	PCP
38	Bahawalpur	Hasilpur Tehsil	168,146	Proposed City
39	Toba Tek Singh	Kamalia Tehsil	166,617	PCP
40	Sheikhupura	Ferozewala Tehsil	162,030	Proposed City
41	Pakpattan	Arif Wala Tehsil	157,063	Proposed City
42	Rajanpur	Jampur Tehsil	155,243	Proposed City
43	Muzaffargarh	Jatoi Tehsil	155,196	Proposed City
44	Gujranwala	Wazirabad Tehsil	152,624	PCP
45	Layyah	Layy1ah Tehsil	151,274	Proposed City
46	Multan	Shujab52ad Tehsil	151,115	Proposed City
47	Bahawalnagar	Haroonabad Tehsil	149,679	Proposed City
48	Gujrat	Gujrat Tehsil	146,743	Proposed City
49	Lodhran	Lodhran Tehsil	144,512	Proposed City
50	Attock	Attock Tehsil	142,826	Proposed City
51	Muzaffargarh	Kot Addu Tehsil	142,161	PCP
52	Khanewal	Mian Channu Tehsil	140,112	Proposed City
53	Khushab	Khushab Tehsil	139,905	Proposed City
54	Rajanpur	Rajanpur Tehsil	137,553	Proposed City
55	Bhakkar	Bhakkar Tehsil	131,658	Proposed City
56	Narowal	Narowal Tehsil	130,692	Proposed City
57	Mianwali	Mianwali Tehsil	129,500	Proposed City
58	Narowal	Shakargarh Tehsil	126,742	Proposed City
59	Vehari	Mailsi Tehsil	125,431	Proposed City
60	Toba Tek Singh	Toba Tek Singh Tehsil	123,102	Proposed City
61	Okara	Depalpur Tehsil	122,759	Proposed City
62	Gujrat	Kharian Tehsil	121,036	Proposed City
63	Sialkot	Sambrial Tehsil	119,571	Proposed City
64	Sargodha	Bhalwal Tehsil	117,982	Proposed City
65	Dera Ghazi Khan	Taunsa Tehsil	115,704	Proposed City
66	Kasur	Pattoki Tehsil	114,530	Proposed City
67	Khushab	Khushab Tehsil	113,188	Proposed City
68	Sahiwal	Chichawatni Tehsil	112,191	Proposed City
69	Sheikhupura	Sheikhupura Tehsil	109,717	Proposed City
70	Nankana	Sangla Hill Tehsil	103,709	Proposed City
71	Rawalpindi	Gujar Khan Tehsil	103,284	Proposed City

72	Sialkot	Pasrur Tehsil	102,717	Proposed City
73	Kasur	Kot Radha Kishan Tehsil	102,057	Proposed City
74	Gujranwala	Gujranwala Saddar Tehsil	100,331	Proposed City
75	Okara	Renala Khurd Tehsil	100,054	Proposed City

Annexure-B

Cities having population between 25K - 100K

Sr.No.	District	City Name	Population 2023
1	Attock	Fateh Jang	81,321
2	Attock	Hasan Abdal	69,529
3	Attock	Jand	56,254
4	Attock	Pindi Gheb	63,810
5	Attock	Hazro	44,242
6	Bahawalnagar	Fort Abbas	83,192
7	Bahawalnagar	Minchinabad	67,164
8	Bahawalnagar	Donga Bonga	39,150
9	Bahawalpur	Uch Sharif	98,852
10	Bahawalpur	Yazman	60,738
11	Bahawalpur	Khairpur Tamewali	47,284
12	Bhakkar	Darya Khan	68,622
13	Bhakkar	Dullewala	25,276
14	Bhakkar	Kalur Kot	34,319
15	Chakwal	Talagang	79,431
16	Chakwal	Choa Saidan Shah	41,074
17	Chakwal	Kallar Kahar	27,928
18	Chiniot	Chenab Nagar	81,695
19	Chiniot	Lalian	52,542
20	Chiniot	Bhawana	39,270
21	Dera Ghazi Khan	Kot Chhuta	59,870
22	Faisalabad	Chak Jhumra	60,131
23	Faisalabad	Dijkot	96,934
24	Faisalabad	Khurian Wala	96,743
25	Faisalabad	Mamu Kanjan	40,249
26	Faisalabad	Tandlian Wala	49,680
27	Gujranwala	Ali Pur Chatha	76,964
28	Gujranwala	Ghakkhar	80,320
29	Gujranwala	Nowshera Virkan	59,639
30	Gujranwala	Qila Didar Singh	74,523
31	Gujrat	Dinga	94,252
32	Gujrat	Kunjah	90,905
33	Gujrat	Sarai Alamgir	73,967
34	Gujrat	Kharian	44,513
35	Hafizabad	Pindi Bhattian	66,511
36	Hafizabad	Sukheke	50,458
37	Hafizabad	Jalalpur Bhattian	44,421
38	Jhang	18-Hazari	30,137
39	Jhang	Ahmadpur Sial	37,801
40	Jhang	Garh Maharaja	42,401
41	Jhang	Shorkot	47,248
42	Jhelum	Dina	84,629
43	Jhelum	Khewra	36,552
44	Jhelum	Pind Dadan Khan	28,197
45	Jhelum	Sohawa	37,488

46	Kasur	Kot Radha Kishan	66,755
47	Kasur	Alahabad	80,097
48	Kasur	Chunian	87,547
49	Kasur	Mustafabad	81,550
50	Kasur	Raja Jang	66,404
51	Kasur	Kanganpur	38,568
52	Kasur	Khadian	48,519
53	Khanewal	Abdul Hakim	67,501
54	Khanewal	Jahanian	50,318
55	Khanewal	Kabirwala	91,932
56	Khanewal	Tulamba	35,069
57	Khushab	Hadali	45,302
58	Khushab	Mitha Tawana	32,870
59	Layyah	Chaubara	57,002
60	Layyah	Chowk Azam	87,376
61	Layyah	Fateh Pur	52,255
62	Layyah	Karor Lal Esan	38,375
63	Lodhran	Dunyapur	51,888
64	Lodhran	Kahror Pacca	98,325
65	Mandi Bahauddin	Malakwal	51,327
66	Mandi Bahauddin	Phalia	62,453
67	Mianwali	Daud Khel	33,141
68	Mianwali	Isa Khel	27,612
69	Mianwali	Kalabagh	27,916
70	Mianwali	Kamar Mashani	39,013
71	Mianwali	Kundian	48,658
72	Mianwali	Piplan	44,985
73	Multan	Shujabad	88,990
74	Multan	Jalalpur Pirwala	89,679
75	Muzaffargarh	Alipur	74,095
76	Muzaffargarh	Chowk Sarwar Shaheed	63,421
77	Muzaffargarh	Shehr Sultan	62,184
78	Muzaffargarh	Daira Din Panah	37,644
79	Muzaffargarh	Khangarh	32,161
80	Muzaffargarh	Sinawan	40,593
81	Nankana	Sangla Hill	65,476
82	Nankana	Nankana	94,988
83	Nankana	Shahkot	89,638
84	Nankana	Warburton	35,053
85	Narowal	Shakargarh	94,847
86	Narowal	Zafarwal	52,639
87	Okara	Haveli Lakha Wasawewala	88,911
88	Okara	Renala Khurd	63,734
89	Okara	Basirpur	65,541
90	Okara	Hujra Shah Muqeem	95,921
91	Okara	Mandi Ahmad Abad	54,860
92	Rahim Yar Khan	Liaquatpur	66,933
93	Rahim Yar Khan	Zahirpir	76,979
94	Rahim Yar Khan	Kot Samaba	35,908
95	Rahim Yar Khan	Trinda Sawai Khan	36,223

96	Rajanpur	Fazalpur	98,627
97	Rajanpur	Kot Mithan	74,479
98	Rawalpindi	Kahuta	75,349
99	Rawalpindi	Kallar Syedan	60,941
100	Rawalpindi	Taxila	75,444
101	Sahiwal	Kameer	38,394
102	Sargodha	Bhera	70,921
103	Sargodha	Kot Momin	63,411
104	Sargodha	Sahiwal	57,374
105	Sargodha	Shahpur Saddar	28,183
106	Sargodha	Sillanwali	49,311
107	Sheikhupura	Farooq Abad	84,716
108	Sheikhupura	Manawala Jodh Singh	51,746
109	Sheikhupura	Narang Mandi	67,137
110	Sheikhupura	Safdarabad	54,242
111	Sheikhupura	Khanqah Dogran	34,949
112	Sheikhupura	Sharak Pur	48,019
113	Toba Tek Singh	Toba Tek Singh	98,155
114	Toba Tek Singh	Pir Mahal	47,376
115	Vehari	Mailsi	93,255

3. AUTHORITIES RESPONSIBLE FOR

3.1. SPONSORING AGENCY

- LG&CD DEPARTMENT

3.2. EXECUTION AGENCY

- PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY

4. PLAN PROVISION / SOURCE OF FINANCING

Sr #	Description
1	**Source of Funding:**Scheme Listed in ADP CFY
2	**GS No:**7371
3	**Total Allocation:**0.000

Comments:

Rs. 1100.00 million during current financial year via GS No-7371
(2024-25). The Scheme is approved in the meeting of Provincial cabinet held on 21.10.2024 (MOM attached as **Annexure-G)**

5. PROJECT OBJECTIVES

Punjab is facing significant urban sanitation challenges that affect public health, economic productivity, and environmental sustainability. Several intermediate cities in Punjab lack adequate sanitation infrastructure, resulting in a variety of problems, including poor hygiene, polluted water, and disease outbreaks. The government has struggled to maintain and upgrade existing sewage systems with broken pipes, leaks, and clogged drains as a norm. Additionally, urban areas lack adequate liquid and solid waste management, which result in overflowing of sewage & garbage piling up on streets and in open spaces. Resultantly, raw sewage enters into the water supply and food chain and has serious health impacts on the citizens.

6. DESCRIPTION AND JUSTIFICATION / DETAIL OF SURVEY / FEASIBILITY STUDY

6.1 JUSTIFICATION OF PROJECT:

Punjab is facing significant urban sanitation challenges that affect public health, economic productivity, and environmental sustainability. Several intermediate cities in Punjab lack adequate sanitation infrastructure, resulting in a variety of problems, including poor hygiene, polluted water, and disease outbreaks. The government has struggled to maintain and upgrade existing sewage systems with broken pipes, leaks, and clogged drains as a norm. Additionally, urban areas lack adequate liquid and solid waste management, which result in overflowing of sewage & garbage piling up on streets and in open spaces. Resultantly, raw sewage enters into the water supply and food chain and has serious health impacts on the citizens.
The sewerage and stormwater drainage systems in the cities of Punjab face significant challenges that need urgent attention. Overburdened and outdated infrastructure, coupled with rapid urbanization and poor maintenance, are the key drivers of the problem. Effective solutions will require a combination of upgrading infrastructure, better waste management, improved flood control, and enhanced public engagement to ensure sustainable urban development in the region.

The need for comprehensive sewerage system is evident in the growing water scarcity crisis. Unplanned and poor sanitation system without treatment has adverse impacts on general environment and public health. The untreated wastewater is contaminating water bodies harming aquatic life and making ground water contaminated resultantly making it unsafe for human use. It is also contributing to the spread of waterborne

diseases, such as cholera and typhoid fever, etc. Currently, most of the wastewater generated in Punjab is being discharged directly into water bodies without any treatment.

Improving Punjab's urban sanitation requires a comprehensive approach. A study of 16 MCs under PCP, has been carried out by PMDFC to identify the needs of building comprehensive sewerage system in intermediate cities of Punjab. The gist of the study reveals as under:

1. The sewerage coverage of the cities is ranging 25-40% of the city area.
2. The sewers are in poor condition, either blocked or the underground pipes lack capacity to carry the generated wastewater flow, resulting in overflows into the streets.

-At street level, wastewater is collected through open drains which later discharge into larger roadside drains that either carry the wastewater flow towards disposal stations or towards the nullahs. Multiple disposal points along the nullahs create more problems for the residents.

-Silting of sewers is resulting in choking/blocking of the network in many places. Screens on drains are broken or non-existent, and gully grated chambers are not regularly cleaned.

1. New lines are not being laid with any approved master plan.
2. Solid waste dumping in the open drains further aggravates the flooding situation as it causes blockage in the drains.
3. New areas/localities need to be added to the sanitation system, as majority of outskirt

-Communities (in the absence of any sanitation infrastructure) are discharging wastewater directly into open plots that later become a solid waste dumping point as well, creating a breeding place for diseases. All such wastewater ponding areas need to be eliminated.

-During rainstorms, the undersized sewerage system, which is hardly capable of handling the dry weather discharge, overflows and creates unhealthy environmental conditions.

1. There is no wastewater treatment plant in the city. All of the wastewater generated is
2. Discharged untreated into the receiving water bodies without giving any consideration to the environment.

As per census 2023, the population of the Punjab is 127.7 million out of which 51.96 million (41%) is living in urban centers and is more prone to issues associated with inadequate sewerage and storm water drainage. The Government of the Punjab is committed to improve the urban environment of the province. The province is facing urban sanitation challenges that affect public health, economic productivity and environmental sustainability. Most of the intermediate cities lack adequate sewerage and storm water drainage infrastructure resulting in variety of problems including poor hygiene, polluted water and disease outbreaks. Irrigation of food chain vegetables with raw sewage without treatment has adverse impacts on general environment and public health. The untreated wastewater is also contaminating ground and surface water besides affecting aquatic life.

Major issues being faced by WATSAN Sector can be summarized as under:

-Inadequate water and sewerage system in cities
-Un-structured investments in the sector
-Lack of Master Planning
-Streets and Constituency wise investments
-Lack of Institutional Capacity
-Institutional overlaps
-Lack of proper O&M
-Almost no waste water treatment

There are many adverse impacts due to above mentioned issues. These impacts pertaining to health, environment and economic degradation of the cities are listed as under:

-Water Borne Diseases
-Child Stunting
-Quality of Food Chain (Irrigation with raw sewage)
-Green House Gases (GHG)
-Contamination of Ground Water and Water Bodies
-Urban Flooding/Damaged Roads
-Low Air Quality
-Increase in Poverty due to health expenditures
-Absence from work due to health issue
-Student Absenteeism

To address these issues there is a dire need to provide comprehensive solution for sewerage and drainage problems, which requires detailed study through the proposed PC-II.

6.2 SCOPE OF THE PROJECT

6.3 SECTORAL SPECIFIC INFORMATION

As attached above

7. YEAR WISE COST ESTIMATES

Financial Components: Capital
Cost Center:OTHERS- (OTHERS)
Fund Center (Controlling):N/A

Grant Number: Engineering - (PC220036)
LO NO:N/A
A/C To be Credited: Assignment

PKR Million

Sr #	Object Code	2024-2025		2025-2026	
		Local	Foreign	Local	Foreign
1	**A06470**-Others	550.000	0.000	550.000	0.000
Total		**550.000**	**0.000**	**550.000**	**0.000**

iii. Estimated Cost	**CONSULTANCY COST** Consultancy Fee Rs. 1,100.00 million Detail of cost attached as **Annexure-D**

8. MANAGEMENT STRUCTURE AND MANPOWER REQUIREMENTS

CORE TEAM OF EXPERTS

S.No	Designation	No of Posts	Qualification	Experience
1	Team Leader	01	BE/B.Sc in Engineering with Masters in Sanitary / Water Resources Engineering Preferably from Foreign Institute.	Minimum 20 years' post qualification experience with 10 years on management position
2	Senior Sewerage & sanitation specialist	03	BE/ BSc in Civil/Mechanical Engineering preferably a higher degree from HEC recognized university.	Minimum 15 years' post qualification experience with 8 years in relevant sector
3	Senior Waste water treatment specialist	03	BE/ BSc in Civil/Mechanical/Chemical Engineering with preferably a higher degree from HEC recognized university	Minimum 15 years' post qualification experience with 8 years in relevant sector
4	Senior Storm Water Drainage Specialist	03	BE/ BSc in Civil/Mechanical Engineering with preferably a higher degree from HEC recognized university	Minimum 15 years' post qualification experience with 8 years in relevant sector
6	Senior Environment/ Climate change/ Social Safeguard Specialist	01	16 Years of education or higher degree in Environmental Engineering / Sciences from HEC recognized university	Minimum 15 years' post qualification experience with 8 years in relevant sector
7	Senior Institutional Strengthening Specialist	01	16 years of education or higher degree in Business Administration/ Public Administration/ Social Sciences from a HEC recognized Institute	Minimum 15 years' of post qualification experience with 8 years in Institutional Development / Capacity Building related to Municipal Services
8	Sewerage & sanitation Expert	06	BE/ BSc in Civil/Mechanical Engineering from HEC recognized university	Minimum 08 years of post-qualification experience with 5 years in relevant Sector
9	Waste water Treatment Expert	03	BE/ BSc in Civil/Mechanical Engineering from HEC recognized university	Minimum 08 years of post-qualification experience with 5 years in relevant Sector
10	Storm Water Drainage Expert	06	BE/ BSc in Civil Engineering from HEC recognized university	Minimum 08 years of post-qualification experience with 5 years in relevant Sector
11	Environment/	03	16 Years of education or higher	Minimum 08 years' of post

	Climate Change Expert		degree in Environmental Engineering / Sciences from HEC recognized university	qualification experience with 5 years in relevant Sector
12	Contracts expert	01	BE/ BSc in Engineering from HEC recognized university	Minimum 08 years of post-qualification experience at national and international levels in the relevant field of civil engineering particularly infrastructure projects
13	Procurement Expert	01	16 years of education or higher degree in Engineering/ Commerce/ Business / Management studies	Minimum 08 years' post qualification experience related to procurement of works, goods and services
14	Geotechnical Expert	01	BE/ BSc in Civil/Mechanical /Geotechnical Engineering from HEC recognized university	Minimum 08 years of post-qualification experience with 5 years in relevant Sector
15	Structural Design Expert	02	BE/ BSc in Civil Engineering from HEC recognized university	Minimum 08 years of post-qualification experience with 5 years in relevant Sector
16	GIS Expert	03	16 years of education or higher degree in Geographic Information System (GIS) or Remote Sensing (RS)/ Space Sciences from HEC recognized Institutes.	Minimum 08 years' of post qualification with 5 years in relevant sector
17	Financial Expert / Economist	03	16 years of education or higher degree in Finance/Commerce (M. Com)/ MBA (Finance)/ Banking/C.A./ACCA/ ACMA/ from HEC recognized Institutes	Minimum 08 years of post-qualification experience in financial management, budgeting, planning, audit & accounts
18	IT Expert	01	16 years of education or higher degree in IT/Computer Sciences/Software Development from a HEC recognized Institute	Minimum 08 years of post-qualification related to practical demonstration in software development
19	Document Controller	01	16 years of education or higher degree in social/ management sciences from HEC recognized University	Minimum 08 years of post-qualification experience with 5 years in relevant Sector.
20	Quantity Surveyor	06	Diploma of Associate Engineer (civil) from an institution recognized by Government of Punjab	8 years of minimum post qualification experience in relevant field. Must be familiar with MRS

21	AutoCAD Operators	06	2 years Diploma of Draftsman from an institution recognized by Punjab Government	Minimum 8 years' post qualification experience in CAD operation
22	Electrical /Mechanical Engineer	03	BE/ BSc in Engineering from HEC recognized university	Minimum 05 years of post-qualification experience in relevant Sector
23	Planning Engineer	01	BE/ BSc in Engineering from HEC recognized university	Minimum 05 years of post-qualification experience in relevant Sector

9. ACTIVITIES / IMPLEMENTATION PLAN OF SCHEME / SURVEY / FEASIBILITY STUDY

The studies and detailed designs will include following:

-Detailed Topographic Survey & GIS Mapping
-Geo-Tech Survey
-Environmental Impact Assessment
-Climate Risk Vulnerability Assessment Studies (CRVA)
-Feasibility study
-Detailed Design, Drawings & Cost Estimates
-Preparation of PC1's.
-Institutional Framework for O&M and Sustainability

10. THE STUDY (TORS OF THE CONSULTANT)

10.1 BRIEF BACKGROUND OF THE PROJECT

Punjab is facing urban sanitation challenges that affect public health, economic productivity and environmental sustainability. Most of the intermediate cities lack adequate sewerage and storm water drainage infrastructure resulting in variety of problems including poor hygiene, polluted water and disease outbreaks. Irrigation of food chain vegetables with raw sewage without treatment has adverse impacts on general environment and public health. The untreated wastewater is also contaminating ground and surface water besides affecting aquatic life. The need for comprehensive sewerage and Storm Water Drainage system is evident in the growing water scarcity crisis.

To address these issues there is a dire need to provide comprehensive solution for sewerage and drainage problems. Government of Punjab has taken initiative to conduct a study of existing Sewerage and Storm Water Drainage Systems and propose solution with proper planning and design. Under the proposed study, about 50 intermediate cities of the province shall be selected, in consultation with Government of the Punjab as Phase-I.

Presently, Urban Unit is conducting a study of Digitalization Mapping of WATSAN Infrastructure in Punjab in 200 small & medium cities and its major tasks are:

-WSS Infrastructure Planning & Mapping
-GIS based WSS Infrastructure Assessment & Mapping
-Replacement planning of existing Infrastructure
-Development of ADAMS - MIS Software
-Capacity Building

Similarly, PMU, LG&CDD is working on Master Land Use Planning in cities of Punjab and its major tasks are:

-Preservation of Prime Agriculture Land

-Compact Development
-Balanced Spatial and Economic Growth
-Revitalization of Urban Centers
-Planning Support System

The Current Assignment has Sectoral Planning and comprehensive solution of Sewerage and Storm Drainage. So, there is no duplication with respect to these assignments. However, the data of these studies is useful and will be taken in account during this assignment.

10.2 OBJECTIVES OF CONSULTANCY

The overall objectives of the Consultancies Services are to;

1. Design in detail the need based, prioritized, and most cost-effective sewerage and drainage projects given in the following sections for benefiting the maximum population with optimal possible investments whereby the cost vs. benefits are considered, after due deliberation and assessments from all stake holders of the MC
2. Prepare the holistic Sectoral Plans for the given sectors in each MC to serve as a true development framework in the sector in next 20 years to keep in pace with the growing trends of the cities, for benefiting the maximum population with optimal possible investments whereby the cost vs benefits are considered instead of ad hoc and piece meal development wasting time and financial resources and bringing smaller benefits (as compared to investments) to the growing population of the cities.

The intention of the process is to develop the sewerage and drainage system at a pace and level where satisfactory service delivery level for the entire growing population of the cities in future is attained and the gap between the supply and demand is bridged instead of widening with passage of time.

10.3 SCOPE, DUTIES & RESPONSIBILITIES OF CONSULTANTS

MASTER SECTORAL PLANNING FOR SEWERAGE & STORM WATER DRAINAGE:

Sectoral Plans & Reports are to be prepared for 50 selected cities of Punjab. For each town/city, the Consultants shall undertake the following tasks:

1. **Data Collection & Analysis**

-Collect infrastructure information in the field, in close coordination with the MCs staff. Secondary information should be used where available but its accuracy should be checked on the ground, where necessary such that MCs operational staff be fully involved.
-Collect and analyze municipal infrastructure data for sewerage & storm water drainage.
-Infrastructure data should be recorded on formats specially designed for each service which will be got vetted form PMDFC.
-The Consultants shall also share completed data collection formats with PMDFC well before the submission of GIS and topographic maps.
-The Consultants shall analyze the collected information for all the municipal sectors, determine current status, identify service delivery problems & gaps and prepare projects pertaining to the improvements and extension of municipal services.

The Consultants may suggest amendments and improvements in the data collection formats already available with PMDFC but should only use amended formats after these have been discussed and agreed with PMDFC.

Specific factors to be assessed by the Consultants include but will not be limited to:

-Extent of existing utility services, including Sewerage & Storm Water Drainage.
-The potential of existing facilities to serve current service areas, present newly developed areas and other areas expected to be developed in future.
-The present capacity of the MC to plan and the action that would be needed to facilitate an improved approach to infrastructure planning.

2. **GIS/Topographic Maps**

-Based on data collection process carried-out for the Master Sectoral Planning, the Consultants shall update base maps on the basis of physical / ground verification which should include existing infrastructure of the above-mentioned services.

-Based on data analysis, exercise carried out for the Master Sectoral Planning, the Consultant shall prepare Descriptive GIS/Topographic Maps of all above mentioned municipal services infrastructure.

-Based on data collection & analysis exercise, the Consultants shall propose possible rehabilitation of the existing infrastructure of Sewerage and Storm Water Drainage and its extensions & improvements.

3. **Sectoral planning**

-Total waste water production in the planning horizon, quantity of waste water presently being disposed-off at various points and in various water bodies and methods of its

-Total remaining waste water quantity to be disposed-off in future in the planning horizon of the city, the methods and point of its

-Extension of the existing sewerage system, if possible, to the proposed inhabitation under Sectoral Plan including all required components like sewers, disposal stations, sullage carriers or force mains and intermediate pumping stations (if unavoidable) along with their proposed

-Location, capacity and sizes of skeleton sewerage system in the areas to be developed in future in the Sectoral Plan horizon including main, branch and outfall sewers, intermediate pumping stations (if required), outfall disposal stations and force mains/sullage carriers and other structure required

-Capacity and proposed location of waste water treatment plants and ultimate disposal arrangements of treated water including force mains or sullage carriers or any other structures required therein for the presently disposed-off untreated water and the waste water from the proposed

-Storm water drainage on the existing main roads and the areas to be planned for future and its ultimate disposal preferably by gravity. Separate storm water drainage shall be planned only in the form of larger sized

-An approximate cost estimate of the operation and maintenance of the sewerage and drainage system in the year 2025-45. **DESIGN OF SEWERAGE SYSTEM**Determination of the spot levels of entire city covering each and every street, main roads & mohallas of the city and plotting on the city plan and preparation of contour map of the city.Water table surveys of the entire sectoral plan area including water table depth and chemical quality of water.Soil or any other type of investigations required for design of cost-effective sewerage system in the city.Preparation of the design criteria.Rehabilitation of the existing sewerage infrastructure for gaining maximum efficiency and maximum benefits to the consumers involving but not limited to the under mentioned components; Repair of the existing pumping machinery and its replacement if it is not repairable including repair/replacement of electrical and other mechanical parts.Repair of civil structures in the disposal/ pumping stations.Repairs or replacement of rusted, damaged and leaking suction or delivery pipes of the pumping machinery along with specials and valves if requiredRepair of the sullage carriers and repair/replacement of force mainsRepair or raising of manholes, including provision of base frames and manhole coversRepair or construction of gulley grating chambersRepair or erection of ventilating shaftsProvision of sewer de-silting and cleaning equipment /machinery and drain or sullage carrier cleaning equipment and machineryRepair of generatorsExtension of the sewerage system to the unserved areas of the city including all required components like sewers, disposal stations, sullage carriers or force mains and intermediate pumping stations if unavoidable.Skelton sewerage system in the areas to be developed in future in the sectoral plan horizon including main and branch sewers, intermediate pumping stations (if required), disposal stations, waste water treatment plants and ultimate disposal arrangements of treated water including force mains or sullage carriers required therein.Construction of any link sewers in the present system which can improve the existing system or reduce the O&M charges.Design of most

suitable and appropriate waste water treatment plant keeping in view the most cost-effective solutions after comparing various options.Carryout Environmental and Social Assessments acceptable to EPA Punjab and recommend mitigation measures as per requirements along with Environmental and Social Management Plans (E&SMPs) for all phases of subproject (Detailed Designing, Construction and O&M)Manpower presently deployed for O&M and total manpower needs after the completion and commissioning of the proposed sewerage system.Waste water tariff structure (if levied), present billing & recovery system, subsidies being injected and proposed improvements in tariff structure and billing & recovery system to reduce the subsidies. **DESIGN OF STORM DRAINAGE SYSTEM**The consultants will be required to carry out the activities as given below:**Topographical and site survey**The survey work shall comprise of topographic and other necessary surveys as detailed below:I) Survey, spot leveling and establishment of proper defined benchmarks connected with Survey of Pakistan's benchmarks2) Plotting the spot levels on a plan for preparation of contour plan of the catchment area wherefrom the rain water flows to the stagnation points.3) Preparation of plans, cross-sections and other related details required for detailed design of drainage arrangements of the stagnation points,4) Prepare plans& L-Sections / profiles of the drainage route showing boundaries of the catchment areas along with existing services both on surface and under-ground,5) Relocation plans, diversion plans for existing drains and sewer lines as per site.6) Collection of other details required for preparation of feasibility and detail design.**Soil /Geotechnical Investigations**The Consultant will conduct the following investigations1) Soil/ geotechnical investigations (field investigations along with in-situ & lab testing through boreholes and test pits) to arrive at the geotechnical parameters required for the foundation design of all the components of the project.2) Proper investigations regarding depth of water table**Feasibility Studies**The consultant will conduct the feasibility studies which will include the following parameters but not limited to:1) Collect meteorological data of relevant cities or nearest meteorological rainfall stations. Based on this data, will draw storm flow (flood) hydrology graphs and calculate the quantity of storm water accumulation on the stagnation points based on time of concentration.2) Study of existing storm water drainage systems including situation analysis of sewerage and sewage disposal, urban flooding and overall drainage and sewerage regime of the city. identify the ponding areas/sore points of the city along with the capacity of the existing drainage network to cater for storm water of the most vulnerable part of the city.3) After analysis, prepare and design various proposals based on various alternatives with their technical and economical justifications to drain the stagnation areas and recommend the best and cost-effective solution in that specific situation. Recommendations will be given against the best option to be adopted based on these alternatives and their comparative analysis4) Find out the best locations/land for the construction of such rain water storage areas basedon such studies as enumerated above5) Prepare the economic and financial analysis along with sensitivity analysis of the projects.6) Work out monthly and yearly Operation and Maintenance cost of the proposed system7) complete environmental and social assessment, primary and secondary baseline survey and environmental quality analysis (from EPA certified labs as per PEQSs and WHO Guidelines) based upon the physical, biological and socio-economic characteristics of each of the city.8) Prepare a final report for each city. **Detailed Engineering Design**The consultant will prepare the detailed engineering design which includes the following but not limited to:1) Prepare the hydrological and structural design of the entire storm water drainage and storage system keeping in view the most economical and technically feasible solutions in the study areas based on feasibility studies duly approved by Client.2) Submit detailed design of all civil works including drainage system, storage tanks and related electrical and mechanical components in accordance with relevant standards etc. duly supported with documents containing design calculations, citations/reference3) Submit layout plans, detailed structural and working drawings showing each and every minute detail required for execution of the project along with all supporting references, design calculations with supporting documents, back up details.4) Final E&S assessment

reports /studies and plans.**Engineer Cost Estimate/ PC-I**The Consultants shall prepare the following but not limited to**:**I) Detailed cost estimates based upon detailed approved drawings with full breakdown of main calculations, quotations and other details of MRS and non MRS item of work.2) PC-I based on the latest instructions and guidelines of Planning Commission, engineeringpractices, relevant guidelines & standards and submit the Client (MCs) for review.

10.4 DELIVERABLE WITH TIMELINES

10.5 TIME DURATION OF PROPOSED CONSULTANCY

10.6 ROLE OF CLIENT AGENCY

10.7 PROFESSIONAL LIABILITIES OF CONSULTANTS

10.8 CORE TEAM OF EXPERTS ALONG WITH QUALIFICATION, EXPERIENCE AND MAN MONTHS REQUIREMENTS

10.9 POSSIBILITY OF PROSPECTIVE PROJECT FINANCING AND IMPLEMENTATION THROUGH DIFFERENT MODES

Not Applicable

10.10 RISK AND SENSITIVITY ANALYSIS AND PROPOSED MITIGATION MEASURES

Here are some key Issues in Sewerage and Storm Water Drainage in cities of Punjab:

1. Overburdened Infrastructure:

-Aged and inadequate infrastructure: Most sewerage and drainage systems in urban centers were designed decades ago when cities had smaller populations and fewer industries. The systems were not built to handle the rapid urban expansion and the increasing volume of wastewater and stormwater.

-Insufficient coverage: A significant portion of the urban population, especially in informal settlements, lacks access to proper sewerage services. In most of the cities, only about 30%-50% of the population is connected to the sewerage system, while others rely on open drains, septic tanks, or pit latrines.

1. Improper Maintenance and Management:

-Lack of regular maintenance: Many systems are poorly maintained, leading to frequent blockages, overflows, and eventual system failure. Poor management practices, coupled with a lack of technical expertise, further contribute to the problem.

-Untreated wastewater discharge: Due to the absence of proper treatment facilities, untreated sewage is often discharged into open drains and water bodies. This contaminates the rivers, leading to severe environmental and health risks.

1. Inadequate Stormwater Drainage:

-Flooding during monsoons: Stormwater drainage systems in most cities are inadequate to handle the volume of rainwater during the monsoon season. As a result, urban flooding has become a recurrent issue, causing extensive damage to infrastructure, homes, and businesses.

-Encroachment and blocked drains: Encroachments along drain paths and improper disposal of solid waste contribute to the clogging of stormwater drains. In cities like Lahore, illegal constructions and dumping have severely restricted the flow of stormwater, resulting in localized flooding.

1. Water Pollution:

-Contamination of groundwater: The lack of proper sewerage treatment leads to contamination of groundwater sources, making water unsafe for consumption. Groundwater, which is a major source of drinking water in Punjab, is increasingly at risk of pollution from untreated sewage.

-Poor solid waste management: The improper disposal of solid waste, such as plastic and industrial

waste, often leads to clogging of drains, both stormwater and sewerage systems. This exacerbates pollution and increases the risk of blockages and flooding.

1. Urbanization and Climate Change:

-Rapid urbanization: Punjab's urban centers have grown rapidly, with urban sprawl leading to increased demand for sewerage and drainage infrastructure. The influx of people from rural areas has put additional pressure on the already overburdened systems.

-Climate change impacts: Erratic rainfall patterns and increased frequency of heavy downpours, coupled with hotter temperatures, have intensified flooding and the overflow of stormwater systems, highlighting the vulnerability of existing drainage infrastructure.

Solutions and Interventions

1. Upgrading and Expanding Infrastructure:

-Modernization of sewerage systems: There is a critical need to upgrade and expand the sewerage systems in Punjab's cities. This includes laying new pipelines, expanding treatment facilities, and ensuring proper waste disposal systems.

-Development of separate stormwater drains: Cities should develop dedicated stormwater drainage systems to manage rainfall separately from sewage systems, preventing overflows and reducing flood risks.

1. Wastewater Treatment:

-Construction of treatment plants: To address the issue of untreated wastewater, new sewage treatment plants must be constructed, and existing ones need to be upgraded. This will help reduce pollution and improve public health.

-Efficient recycling and reuse of water: Promoting the reuse of treated wastewater for industrial and agricultural purposes can reduce pressure on potable water resources.

1. Flood Control Measures:

-Improved stormwater management: Development of flood mitigation infrastructure, such as retention ponds, upgraded drains, and rainwater harvesting systems, can help manage stormwater more effectively.

-Enhanced urban planning: Restricting encroachments along drain paths and ensuring proper urban planning to create open spaces for stormwater absorption will reduce flooding risks.

1. Public Awareness and Engagement:

-Community-based waste management: Encouraging residents to properly dispose of waste and avoid dumping it in drains will help prevent blockages and pollution.

-Public education on water conservation: Promoting water conservation and efficient waste management practices can reduce the burden on sewerage systems.

1. Collaboration with Private Sector and NGOs:

-Partnerships between the government, private sector, and NGOs can help mobilize resources and expertise to address the issue of sewerage and stormwater drainage more effectively.

10.11 FORWARD BACKWARD LINKAGES OF THE PROPOSE STUDY / SURVEY

10.12 EXPECTED OUTPUT OF THE PROPOSED FEASIBILITY STUDY / SURVEY

11. INDICATE STUDIES / SURVEYS ALREADY UNDERTAKEN:

Presently, Urban Unit is conducting a study of Digitalization Mapping of WATSAN Infrastructure in Punjab

in 200 small & medium cities and its major tasks are:

-WSS Infrastructure Planning & Mapping
-GIS based WSS Infrastructure Assessment & Mapping
-Replacement planning of existing Infrastructure
-Development of ADAMS - MIS Software
-Capacity Building

Similarly, PMU, LG&CDD is working on Master Land Use Planning in cities of Punjab and its major tasks are:

-Preservation of Prime Agriculture Land
-Compact Development
-Balanced Spatial and Economic Growth
-Revitalization of Urban Centers
-Planning Support System

12. CERTIFICATE

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Fax No:04299204390
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Prepared by	Manager (Engineering) Punjab Municipal Development Fund Company	
Checked by	Senior Program Officer (Infrastructure) Punjab Municipal Development Fund Company	
Reviewed by	General Manager (Engineering) Punjab Municipal Development Fund Company	
Forwarded by	Managing Director Punjab Municipal Development Fund Company	22.11.24
Forwarded by	Secretary LG & CD Department, Govt. of Punjab	

13. CHECKLIST FOR INITIAL SCRUTINY

1. Signature of the Administrative Secretary	(Yes)
2. The Study (TORS Of The Consultant)	
a. Brief background of The Project	(No)
b. Objective of Consultancy	(No)
c. Scope, Duties & Responsibilities of Consultants	(No)
d. Deliverables with Timelines	(No)
e. Time Duration of Proposed Consultancy	(No)
f. Role of Client Agency	(No)
g. Professional Liabilities of Consultants	(No)
h. Core Team of Experts along with Qualification, Experience and Man Months Requirements	(No)
3. Management Structure And Manpower Requirements	(Yes)
4. Implementation Plan (Gantt Chart or Line Chart / Bar Chart	(No)
5. Risk Analysis And Proposed Mitigation Measures	(No)
6. Year Wise Financial Phasing	(No)

Annexure-D

COST ESTIMATE

SUMMARY OF COST		
S. No	**Description**	**Total Cost (PKR)**
1	Remuneration Cost	491,595,600
2	Reimbursable / Direct Cost	376,800,000
3	**Sub Total**	**868,395,600**
	PMDFC Services Charges @10%	**86,839,560**
	TPV @ 0.5%	**4,341,978**
	TOTAL	**959,577,138**
	Govt Taxes / PRA @ 16% (Serial No 3)	**138,943,296**
	Grand Total	**1,098,520,434**
	Cost in Millions PKR	**1,100**

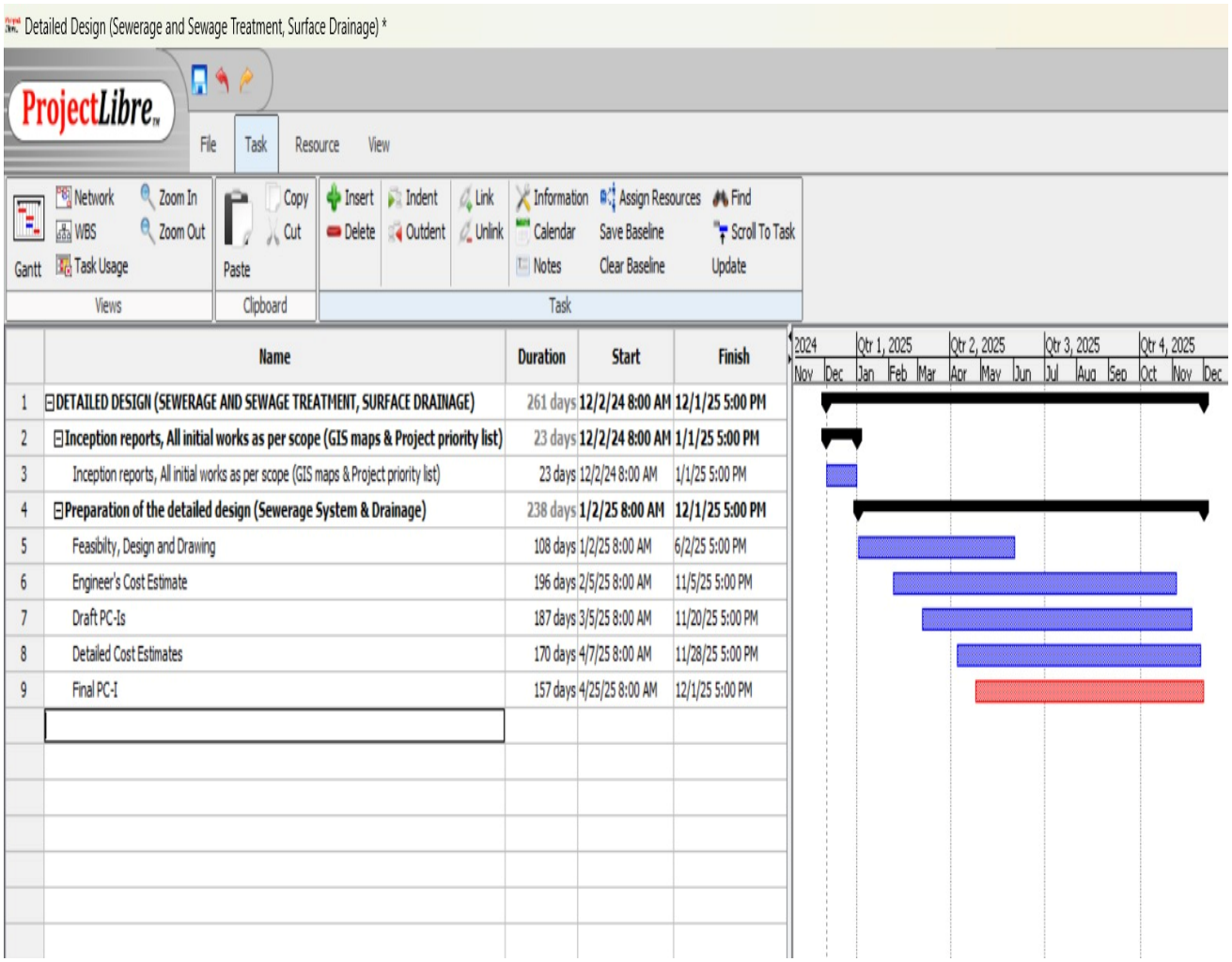
REMUNERATION COST (Experts Team Composition)						
A	**Manpower cost**					
S. No	**Designation**	**No of slots**	**Man Months each**	**Total Man months**	**Cost per month**	**Total cost Rs.**
1	Team Leader	1	12	12	1,450,000	17,400,000
2	Senior Sewerage & Sanitation Specialist	3	12	36	1,034,100	37,227,600
3	Senior Waste Water Treatment Specialist	3	12	36	1,034,100	37,227,600
4	Senior Storm Water Drainage Specialist	3	12	36	1,034,100	37,227,600
5	Senior Environment/Climate Change/Social Safeguard Specialist	1	12	12	1,034,100	12,409,200
6	Senior Institutional Strengthening Specialist	1	12	12	1,034,100	12,409,200
7	Sewerage & sanitation Expert	6	12	72	752,100	54,151,200
8	Waste Water Treatment Expert	3	12	36	752,100	27,075,600
9	Storm Water Drainage Expert	6	12	72	752,100	54,151,200
10	Environment/Climate Change/Social Safeguard Expert	3	12	36	752,100	27,075,600
11	Contracts Expert	1	12	12	752,100	9,025,200
12	Procurement Expert	1	12	12	752,100	9,025,200
13	Geotechnical Expert	1	12	12	752,100	9,025,200
14	Structural Design Expert	2	12	24	752,100	18,050,400
15	GIS Expert	3	12	36	752,100	27,075,600
16	Financial Expert / Economist	3	12	36	752,100	27,075,600
17	IT Expert	1	12	12	752,100	9,025,200
18	Electrical /Mechanical Engineer	3	12	36	584,200	21,031,200
19	Planning Engineer	1	12	12	584,200	7,010,400
20	Document Controller	1	12	12	421,400	5,056,800

21	Quantity Surveyor	6	12	72	150,000	10,800,000
22	AutoCAD Operators	6	12	72	150,000	10,800,000
23	Data Entry Operator	6	12	72	70,000	5,040,000
24	Support Staff	12	12	144	50,000	7,200,000
	Total Manpower Cost				**Total**	**491,595,600**

*Due to urgency of the work, the positions and man-months can be increased keeping view that the total cost will remain same.

Reimbursable-Direct Cost						
Sr. No.	Description	Unit	Nos	Quantity	Unit Price	Amount (Pak Rs.)
1	Rental Project Office (Lahore)	Month	1	12	600,000	7,200,000
2	Office utilities, Electric, Gas, Water etc. and office equipment Computers, Printers etc. (Lahore)	Month	1	12	200,000	2,400,000
3	Office Supplies /Stationery /Report Printing etc (Lahore)	Month	1	12	100,000	1,200,000
4	PTCL Telephone, Internet, EVO, Mobile Cards etc. (Lahore)	Month	1	12	100,000	1,200,000
5	Rental Project Office (Regions)	Month	3	12	300,000	10,800,000
6	Office utilities, Electric, Gas, Water etc. and office equipment Computers, Printers etc. (Regions)	Month	3	12	150,000	5,400,000
7	Office Supplies /Stationery /Report Printing etc (Regions)	Month	3	12	100,000	3,600,000
8	PTCL Telephone, Internet, EVO, Mobile Cards etc. (Regions)	Month	3	12	100,000	3,600,000
9	Rental Transportation	Month	15	12	150,000	27,000,000
10	Running and maintenance of vehicles including POL & Driver etc.	Month	15	12	80,000	14,400,000
11	Surveys / Studies / Geo Tech Investigation etc Costs	Nos	50	1	4,500,000	225,000,000
12	Environment & Social Impact Assessment (ESIA) and Climate Risk/vulnerability Assessment (CRVA) costs	Nos	50	1	1,500,000	75,000,000
	Total Reimbursable-Direct Cost (Pak Rs.)					**376,800,000**

Annexure-F


Detailed Design (Sewerage and Sewage Treatment, Surface Drainage) *
ProjectLibre
File
Task
Resource
View
Network
WBS
Task Usage
Gantt
Views
Zoom In
Zoom Out
Paste
Copy
Cut
Clipboard
Insert
Delete
Indent
Outdent
Link
Unlink
Information
Calendar
Notes
Assign Resources
Save Baseline
Clear Baseline
Find
Scroll To Task
Update
Task
Name
Duration
Start
Finish
1 DETAILED DESIGN (SEWERAGE AND SEWAGE TREATMENT, SURFACE DRAINAGE) 261 days 12/2/24 8:00 AM 12/1/25 5:00 PM
2 Inception reports, All initial works as per scope (GIS maps & Project priority list) 23 days 12/2/24 8:00 AM 1/1/25 5:00 PM
3 Inception reports, All initial works as per scope (GIS maps & Project priority list) 23 days 12/2/24 8:00 AM 1/1/25 5:00 PM
4 Preparation of the detailed design (Sewerage System & Drainage) 238 days 1/2/25 8:00 AM 12/1/25 5:00 PM
5 Feasibilty, Design and Drawing 108 days 1/2/25 8:00 AM 6/2/25 5:00 PM
6 Engineer's Cost Estimate 196 days 2/5/25 8:00 AM 11/5/25 5:00 PM
7 Draft PC-Is 187 days 3/5/25 8:00 AM 11/20/25 5:00 PM
8 Detailed Cost Estimates 170 days 4/7/25 8:00 AM 11/28/25 5:00 PM
9 Final PC-I 157 days 4/25/25 8:00 AM 12/1/25 5:00 PM
2024
Qtr 1, 2025
Qtr 2, 2025
Qtr 3, 2025
Qtr 4, 2025
Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec