



**LAHORE DEVELOPMENT AUTHORITY**

**INTEGRATED MASTER PLAN  
FOR  
LAHORE-2021**

**FINAL REPORT  
VOLUME - III  
SHORT TERM PLAN**

**NES  
PAK**

**NATIONAL ENGINEERING SERVICES PAKISTAN (Pvt.) Ltd.**

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*Handwritten notes:*  
1. 40%  
2. Lahore Master Plan  
3. 100%  
4. 100%



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## PREFACE

This report is the fourth deliverable required to be presented to Lahore Development Authority (LDA) towards the finalization of Integrated Master Plan for Lahore (IMPL), in accordance with the contract for Consultancy Services and Terms of Reference. The first draft of this report was submitted to LDA in July 1998. Various observations/ comments on the draft report were received and incorporated and the revised version in the form of second draft report was submitted to LDA in November 2002.

A series of presentations made to various government agencies, the technocrats and professionals including town planners, architects, engineers, builders, administrators etc. at various forums to invite their suggestions/ comments which were accordingly incorporated in this document. This report got clearance from the Project Steering Committee on June 23, 2004 and was approved by the Lahore District Council on October 06, 2004.

The published report on 1998 Population Census for Lahore District was available as from February 2001. Since population is the basic parameter for undertaking planning studies, the whole data base of this report was revised/ updated according to the latest census figures. The purpose of this exercise/ assignment is essentially to establish an integrated framework for the development of Lahore by the year 2021 and to create a sustainable working and living environment for its citizens while improving the quality of life.

The preparation of IMPL has been undertaken through a comprehensive process of data accumulation, processing, surveys, field visits, and analytical studies. Extensive discussions with public and private sectors including eminent professionals, civic personalities and special interest groups were also an important element of their participation in the plan formulation. IMPL in essence, therefore, is also intended to serve as a practical working document with sound basis, for the concerned authorities to adopt the proposals and recommendations, and proceed to plan implementation.

This report is divided and submitted into three separate volumes as follows:

Volume-I	Existing Scenario
Volume-II	Analysis and Proposals
Volume-III	Short Term Plan

Volume-I presents a review of existing scenario in Lahore and covers all aspects of the metropolitan area, namely historical background, physical characteristics, socio-economic profile, land development, land use, housing, transportation, community facilities, utility services, environmental issues and urban governance.

Volume-II of the report focuses on the analysis of the above situation and preambles the structure for plan making. It discusses key issues that are to be addressed, the growth components, potentials and constraints of Lahore Metropolitan Area (LMA). This is followed by the proposals for the Integrated Master Plan up to the year 2021. It presents recommendations in all sectors of urban development i.e. land use, land development, housing, transportation, community facilities, public utilities, infrastructure, environment and institutional framework.

Volume-III presents a list of projects identified in various sectors with tentative cost estimates for implementation during the first 5 years.

Apart from the three volumes of the report mentioned above, an Executive Summary is also given in a separate volume which presents the salient features of the three volumes of the Master Plan Report in a summarized form.

NESPAK gratefully acknowledges with gratitude the co-operation of LDA and its associated agencies such as WASA and TEPA including the Ex-Additional Director General (Town Planning) LDA, the Managing Director WASA, the Chief Traffic Engineer TEPA, for their help during formal and informal discussions at various stages of this assignment.

Special thanks are due to Mian Aamir Mahmood, District Nazim; Mr. Akhlaq Ahmad Tarar, Director General LDA; Mr. Khalid Sultan, District Coordination Officer; and Mr. Shaukat Jamal Khawaja, Chief Metropolitan Planner, LDA for their valuable contribution, guidance and help throughout during the preparation of this document.

Last but not the least, are the six Town Nazims of the City District Government, the District Officers (Planning and Coordination) of these Towns, Executive District Officer (Works and Services) and various officials of the City District Government who have directly or indirectly contributed during the Plan preparation. Thanks are also due to various other public agencies like Provincial P&D Department, Housing and Physical Planning Department, Transport Department, Environment Protection Department, Ex-Metropolitan Corporation Lahore (ex-MCL), Lahore and Walton Cantonment Boards, Parks and Horticultural Authority (PHA), Meteorological, Education, Health and Irrigation & Power Departments, Punjab Bureau of Statistics, Water and Power Development Authority (WAPDA), Sui Northern Gas Pipelines Limited (SNGPL), Pakistan Telecommunications Corporation Limited (PTCL), the private sector and numerous individuals who rendered their assistance and guidance on various occasions.

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# INTEGRATED MASTER PLAN FOR LAHORE

## VOLUME-III: SHORT TERM PLAN

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## LIST OF ABBREVIATIONS USED IN THE REPORT

AC	Asbestos Cement
ACSR	Aluminum Conductor Steel Reinforced
ADB	Asian Development Bank
ADP	Annual Development Plan
Amp	Ampere (unit of electric current)
BOD	Bio-Chemical Oxygen Demand
BRB	Bambanwala Ravi Bedian Canal
CADPAD	Computer Aided Distribution, Planning and Design
CBD	Central Business District
CDG	City District Government
CDM	M/s Camp Dressers and Mckee
CDWP	Central Development Working Party
Cfs	Cubic feet per second
CI	Cast Iron
CMP	Chief Metropolitan Planner, LDA
COD	Chemical Oxygen Demand
CTE	Chief Traffic Engineer, TEPA
DG	Director General
DI	Ductile Iron
DMD	Deputy Managing Director
DO	Dissolved Oxygen
DTA	District Transport Authority
DTP	Director Town Planning, LDA
EIS	Environmental Impact Statements
EPA	Environmental Protection Agency
EPD	Environment Protection Department
E&T	Excise and Taxation Department
ft	Feet
GI	Galvanised Iron
gpcd	Gallons per capita per day
Ha	Hectare
HFL	High Flood Level
HIES	Household Integrated Economic Survey
HRT	Heavy Rail Transit
HT	High Tension
HUD&PHED	Housing, Urban Development and Public Health Engineering Department
Hz	Hertz (cycle per second)
IDA	International Development Agency
IMA	Inner Metropolitan Area
JICA	Japan International Cooperation Agency
Km	Kilometre
KV	Kilo Volt
KVA	Kilo Volt Ampere
KW	Kilo Watt
LCB	Lahore Cantonment Board
LCCHS	Lahore Cantonment Cooperative Housing Society
LDA	Lahore Development Authority
LGO	Local Government Ordinance
LHV	Lady Health Visitor
LIT	Lahore Improvement Trust
LMA	Lahore Metropolitan Area
LMC	Lahore Municipal Corporation
LPB	Lahore Protection Bund
Lpcd	Litres per capita per day
Lps	Litres per second
LRT	Light Rail Transit
LSP	Lahore Sanitation Programme
LT	Low Tension

## LIST OF ABBREVIATIONS USED IN THE REPORT

LTR	Lahore Telecommunications Region
LUPTS	Lahore Urban Development and Traffic Study
LUTP	Lahore Urban Transport Project
m	metre
m <sup>3</sup> /s	cubic metres per second
m <sup>3</sup> /d	million cubic feet per day
MCH	Maternity and Child Health Centre
MCL	Metropolitan Corporation Lahore
m <sup>3</sup> /d	Million Cubic Metres per day
MD	Managing Director
MEUAFW	Ministry of Environment, Urban Affairs, Forestry and Wildlife
mgd	million gallons per day
mpn	Most probable number
MTS	Model Town Society
MVA	Mega Volt Ampere
NCS	National Conservation Strategy Project
NEQS	National Environmental Quality Standards
NESPAK	National Engineering Services Pakistan (Pvt.) Limited
NGO	Non-Governmental Organisation
NTRC	National Transport Research Centre
O&M	Operation and Maintenance
ODA	Overseas Development Agency
P&E	Planning and Evaluation
RCC	Reinforced Cement Concrete
PCU	Passenger Car Unit
PDWP	Provincial Development Working Party
PHC	Primary Health Centre
PIHS	Pakistan Integrated Household Survey
PLGO	Punjab Local Government Ordinance
PMDF	Punjab Municipal Development Fund
PRTC	Punjab Road Transport Corporation
PTA	Provincial Transport Authority, Punjab
PTCL	Pakistan Telecommunications Corporation Limited
PUDP	Provincial Urban Development Project
PVC	Polyvinyl Chloride
ROW	Right of Way
Rs	Pakistan Rupees
RTA	Regional Transport Authority
SAP	Social Action Programme
SEC	Shalimar Escape Channel
SNGPL	Sui Northern Gas Pipelines Limited
SWM	Solid Waste Management
TDCP	Tourist Development Corporation Punjab
TDS	Total Dissolved Solids
TEPA	Traffic Engineering and Transport Planning Agency
TSS	Total Suspended Solids
UBD	Upper Bari Doab Canal
UD	Urban Development Wing, LDA
UET	University of Engineering and Technology, Lahore
UNEP	United Nations Environmental Programme
WADPA	Water and Power Development Authority
WASA	Water and Sanitation Agency
WHO	World Health Organisation

**VOLUME III**

**SHORT TERM PLAN**

