A SURVEY FOR THE BRIDGE MAINTENANCE PLANNING (THE CHAO PHRAYA RIVER CROSSING BRIDGES) IN THE KINGDOM OF THAILAND

REPORT 1



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JAPAN INTERNATIONAL COOPERATION AGENCY
(JIGA)

CHODALCO., LTD. METROPOLITAN EXPRESSWAY CO., LTD.

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Ministry of Transportation Department of Rural Roads The Kingdom of Thailand

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FINAL REPORT REPORT 1

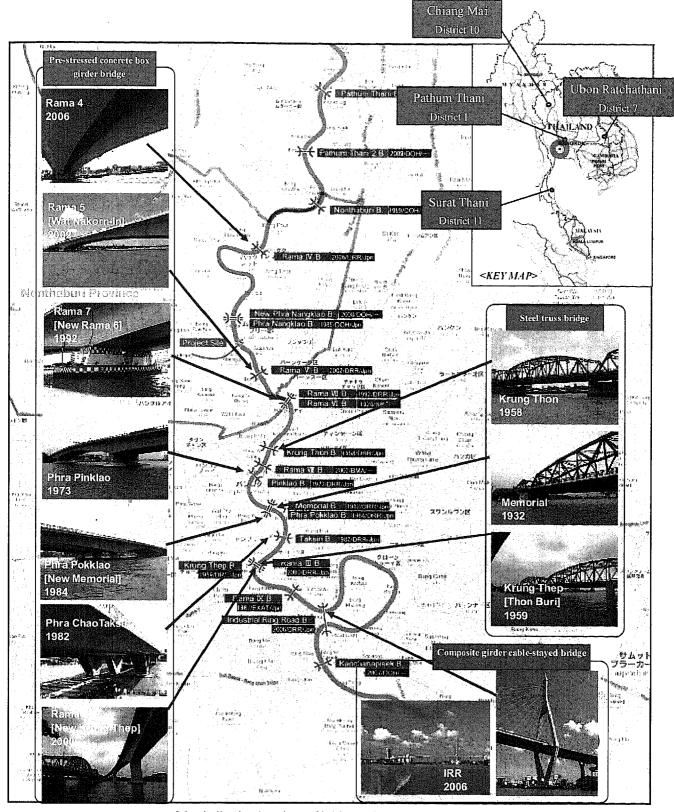
March 2011

JAPAN INTERNATIONAL COOPERATION AGENCY

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Map indicating locations of bridges subject to investigation

Kingdom of Thailand a Survey for the Bridge Maintenance Planning (The Chao Phraya River Crossing Bridges)

Final Report

REPORT 1

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ABBREVIATION

AADT Average Annual Daily Traffic

AASHTO American Association of State Highway and Transportation Officials

ADB Asian Development Bank

AIT Asian Institute of Technology

ARD Office of Accelerated Rural Development

B Baht

B/C Benefit / Cost Ratio

BMA Bangkok Metropolitan Administration
BMMS Bridge Maintenance Management System

BMR Bangkok Metropolitan Region
BOD Biochemical Oxygen Demand

BQ Bill of Quantity

CFRP Carbon Fiber Reinforced Plastics

CMLT Commission of Management of Land Traffic

C/S Construction Supervision

D/D, DD Detailed Design

DOH Department of Highways
DRR Department of Rural Roads

DVD Digital Versatile Disk

EIA Environment Impact Assessment

E/N Exchange of Notes

EXAT Expressway Authority of Thailand

F/S Feasibility Study

GDP Gross Domestic Products

GRDP Gross Regional Domestic Products

GMS Greater Mekong Sub-region

H Height

HDPE High Density Polyethylene

H_{ge} Height at Center

H_{gs} Height at Support (Bearing)HIV Human Immunodeficiency Virus

HWL High Water Level

IBRD International Bank for Reconstruction and Development

IRR Industrial Ring Road

JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
L	Length
L/A	Loan Agreement
L/C	Letter of Credit
LCC	Life Cycle Cost
L_{max}	Maximum Length
M/C	Motor Cycle
MEA	Metropolitan Electronic Association
M/M	Man-Month
MOF	Ministry of Finance
MOI	Ministry of Interior
MOT	Ministry of Transport
MRT	Mass Rapid Transit
MRTA	Mass Rapid Transit Authority of Thailand
MSL	Mean Sea Level
NESDB	Office of the National Economic and Social Development Board
NESDP	National Socio—Economic Development Plan
NPV	Net Present Value
OD	Origin and Destination
ODA	Official Development Assistance
O&M	Operation and Maintenance
ONEP	Office of Natural Resources and Environmental Policy and Planning
OTP	Office of Transport and Traffic Policy and Planning
PC	Pre-stressed Concrete
PCC	Property Compensation Community
PCU	Passenger Car Unit
PDMO	Public Debt Management Office
PPP	Public and Private Partnership
P/Q	Pre-Qualification
PWD	Public Works Department
RAP	Resettlement Action Plan
ROW	Right of Way
SAPS	Special Assistance for Project Sustainability (JBIC)
SRT	State Railway of Thailand

Transport Data and Model Center

TDMC

TDML	Fransport Data and Model Integrated with Multimodal Transport and Logistics
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

UTDP Urban Transport Development Partnership

UTM Universal Transverse Mercator

VAT Value-added Tax

V/C (VCR) Volume/ Capacity Ratio
VOC Vehicle Operating Cost

VOT Value of Time WB World Bank