A STATE OF THE ART REPORT ON STATEWIDE TRAFFIC ASSIGNMENT MODELS

by

JAMES HENRY JATKO

B.S., Rensselaer Polytechnic Institute, 1972

A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Civil Engineering

KANSAS STATE UNIVERSITY Manhattan, Kansas

1976

Approved by:

Major Professor

205

LD 2668 R4 1976 J37 C.2

INTERIM REPORT

SECTION I

Document

Project No. 2625

A STATE OF THE ART REPORT ON STATEWIDE TRAFFIC ASSIGNMENT MODELS

by

James H. Jatko

Graduate Research Assistant

Kansas State University

Manhattan, Kansas 66502

In Cooperation With

Planning and Development Division, Kansas Department of Transportation

and

U.S. Department of Transportation Federal Highway Administration

April 1976

The contents of this report reflect the views of the author who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views of this University, the State Department of Transportation or the Federal Highway Administration.

ILLEGIBLE DOCUMENT

THE FOLLOWING
DOCUMENT(S) IS OF
POOR LEGIBILITY IN
THE ORIGINAL

THIS IS THE BEST COPY AVAILABLE

THIS BOOK CONTAINS NUMEROUS PAGES WITH DIAGRAMS THAT ARE CROOKED COMPARED TO THE REST OF THE INFORMATION ON THE PAGE. THIS IS AS RECEIVED FROM CUSTOMER.

ACKNOWLEDGEMENT

The writer expresses his appreciation to Dean Landman, Planning and Development Division, Kansas Department of Transportation and Professor Eugene R. Russell, Civil Engineering Department, Kansas State University for their advice and assistance in assembling the information provided in this report; to the Federal Highway Administration, U. S. Department of Transportation, and to all the State Highway Departments, consultant firms, and other transportation research agencies which provided valuable information on statewide and regional transportation studies.

TABLE OF CONTENTS

A Demp A Co	P.	Page 1
ABSTRACTi		
ACKNOWL	EDGEMENT	ii
LIST OF	FIGURES	iv
SECTION		
ı.	INTRODUCTION	1
	Purpose and Sources of Information	3
II.	DEVELOPMENT OF AVAILABLE TECHNOLOGY	4
	Transportation Need Studies	4
	Origin-Destination Survey	5
	Intercity Traffic Generation Models	13
	Trip Distribution Models	22
	Growth Factors	27 31
	Computer Technology	41
III.	SELECTED ABSTRACTS OF STATEWIDE TRANSPORTATION STUDIES	56 60 63 68
	Kentucky (1976)	86
IV.	SUMMARY AND CONCLUSIONS	92
LIST OF	REFERENCES	95