HIGHWAY TRAFFIC ANALYSIS AND DESIGN

HIGHWAY TRAFFIC ANALYSIS AND DESIGN

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Preface

More than a decade has passed since transport and traffic engineering first became recognised as an academic subject in centres of higher education in the United Kingdom. In this period the interdependence between land use and transport needs has been firmly established and the modelling of the transport system has seen considerable advances.

During this same time it has been realised that highway transport demand in urban areas will have to be balanced against the overall social, economic and environmental costs of movement.

This book includes the fundamental principles of land use, transport planning techniques and the subsequent economic evaluation of highway schemes. It reviews the analytical and practical aspects of highway traffic flow with sections discussing noise generation and pollution and the principles of congestion restraint and road pricing.

Highway intersections are considered in detail. There is a comprehensive treatment of traffic signal control, which ranges from isolated signal-controlled intersections to area-wide signal control.

So that many engineers and planners engaged in transport work, but without the benefits of formal tuition, will find this book useful, each section contains questions by which the reader may test his comprehension of the subject matter by reference to the model answers.

The author would like to express his thanks to those postgraduate students of transportation at the University of Bradford who made valuable comments on the script and examples; also to Professor C. B. Wilby, Chairman of the Schools of Civil and Structural Engineering, for his encouragement for transportation teaching and research.

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