

Welcome to Book Review

TRANSPORTATION ENGINEERING AND PLANNING



Book Review by:

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TRANSPORTATION ENGINEERING AND PLANNING

Book Facts:

❑ Authors:

- ❑ Constantinos S. Papacostas,
- ❑ Panos D. Prevedouros

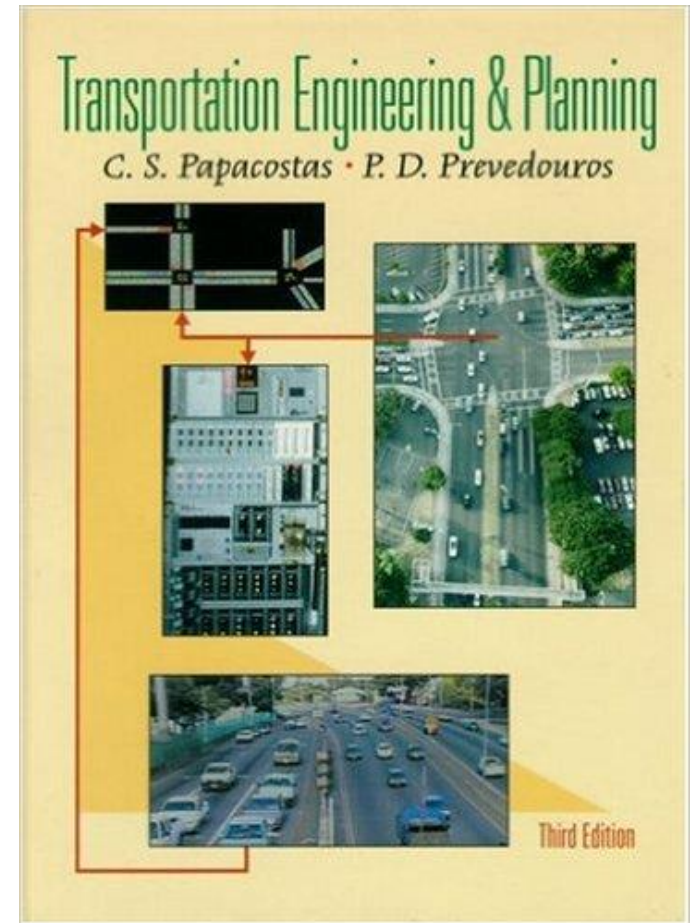
❑ Publisher:

- ❑ Pearson Education/Prentice Hall

❑ Cost :

- ❑ Eastern Economy Edition (paper back) is available for 499 INR.
Hard cover costs \$180.

❑ Total no. of pages: 685.



About the Authors

1. Dr. Constantinos S. Papacostas

- ❑ Currently enjoying his retirement
 - ❑ B.E, M.S & Ph.D (1974) from Carnegie-Mellon University
 - ❑ He was working as Professor and Chair of Civil and Environmental Engineering, University of Hawaii
 - ❑ Director, Institute of Transportation Engineers, Hawaii.
 - ❑ Member of various technical bodies (ASCE, ITE, TRB)
 - ❑ President of ASCE & ITE (Hawaii Section)
 - ❑ Outstanding Faculty award by ASCE in 1990 & 1998.
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About the Authors

2. Dr. Panos D. Prevedouros

- ❑ Professor and Chair of Civil and Environmental Engineering, University of Hawaii
 - ❑ B.S, M.S & Ph.D Northwestern University, Evanston, Illinois.
 - ❑ Outstanding Civil Engineering Faculty Award, ASCE in 1996.
 - ❑ Member and Reviewer of ASCE, ITE and TRB.
 - ❑ Consultant Engineer and
 - ❑ Evaluator of various Engineering programs in Greece.
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About the Book

- ❑ Used as a standard text book for UG programs and PG programs in Civil/Transportation Engineering especially in the Western countries.
 - ❑ In Indian Universities this book has been used as a reference book in the course of Transportation/Highway engineering PG programs and some UG Programs.
 - ❑ Book has a rating of 3.8/5 @ Good Reads.com
 - ❑ Reviews are very good on Amazon.com, Amazon.in and Flipkart.com.
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About the Book

- ❑ Inter-disciplinary approach to transportation engineering.
 - ❑ Fundamentals of pure sciences, mathematics, engineering mechanics & socio-economics has been emphasized upon.
 - ❑ Even a common man will be able to read this book and grasp a lot of concepts illustrated through detailed figures and flowcharts.
 - ❑ Features latest developments in transportation engineering (3rd edition), hence offers state of art knowledge on the subject.
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About the Book – Sections/Parts

- This book weaves a wide spectrum of coverage ranging from basis engineering principles, its applications, implications and forecasting into four sections:
 1. Design and Operation
 2. Transportation Systems
 3. Transportation Impacts
 4. Supporting Elements
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Section 1: Design and Operation

- Road Way Design
 - Traffic Stream Flow Models
 - Capacity and Level of Service (LOS)
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Section 1: Design and Operation

Roadway design

- Braking distances
 - Reaction time and its factors (PIEV theory)
 - Sight distances
 - Geometric design of Highway
 - Intersections
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Section 1: Design and Operation

Traffic stream flow models & LOS

- Vehicular stream characteristics
 - Stream measurements
 - Flow curves
 - Capacity and level of service
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Section 2: Transportation Systems

- Transportation Modes
 - Urban and Intelligent Transportation Systems (ITS)
 - Transportation Planning
 - Travel Demand Forecasting
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Section 2: Transportation Systems

Transportation Modes & ITS

- ❑ Modes of Transportation, pros and cons
 - ❑ Urban transport modes, Demand response mode, Dual modes
 - ❑ Traffic congestion and its effects
 - ❑ Intelligent transportation systems – thanks to Google and software developers.
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Section 2: Transportation Systems

Transportation Planning & Demand forecasting

- Land use models & zoning
 - Trip generation
 - Trip distribution
 - Mode choice
 - Highway assignment
 - Traffic forecasting
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Section 3: Transportation Impacts

- Traffic impact and Parking Studies
 - Air quality noise and energy impacts
 - Evaluation and Choice
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Section 4: Supporting Elements

- Elements of Engineering Economy
 - Probability and Statistics
 - Queuing and Simulation
 - Transportation Software
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Need for this book in Indian Universities

- Bridging the gap - developing and developed world
 - Innovative/Research ideas
 - Collaborations
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Conclusion

- ❑ Each unit ends with a detailed introduction and ends with a well written summary.
 - ❑ Good number of references and exercises are incorporated in this book after each unit.
 - ❑ Figures, Tables, Illustrations are a plenty, even making a lay man imagine and understand the basic concepts of the topic.
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THANK YOU
