1. Record Nr. UNINA9911007096103321

Titolo	Urban aerodynamics : wind engineering for urban planners and designers / / prepared by the Task Committee on Urban Aerodynamics of the Technical Council on Wind Engineering of the American Society of Civil Engineers
Pubbl/distr/stampa	Reston, VA, : American Society of Civil Engineers, c2011
ISBN	0-7844-7636-5
Descrizione fisica	1 online resource (70 p.)
Disciplina	624.1/75
Soggetti	Wind-pressure Tall buildings - Aerodynamics Structural engineering Urban climatology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1 Introduction; Chapter 2 Elements of Urban Aerodynamics; Chapter 3 Wind Engineering in Urban Aerodynamics; Chapter 4 Tools and Techniques; Chapter 5 Concluding Remarks
Sommario/riassunto	Prepared by the Task Committee on Urban Aerodynamics of the Environmental Wind Engineering Committee of the Technical Council on Wind Engineering of ASCE. Urban Aerodynamics: Wind Engineering for Urban Planners and Designers introduces the basic tools and technology used by engineers to determine the effects of wind on city streets and structures. Familiarity with the fundamentals of urban aerodynamics offers many advantages to city planners and urban designers, most especially the opportunity to incorporate quantitative techniques into the design and development process. This volume traces the historical development of wind engineering techniques leading up to today's use of boundary layer wind tunnel studies and computational fluid dynamics assessments. Examples show the application of wind engineering to address urban issues such as pedestrian-level wind control, design for hurricane shelter, urban summer breeze penetration, winter wind shielding, the natural

ventilation of buildings, and dispersion of airborne pollutants. Current tools and techniques for both qualitative and quantitative assessment of urban wind effects are reviewed, and an extensive list of references is included. This book is a compact essential reference for city planners, urban designers, and architects, as well as structural and wind engineers.