Architecture 4.411
Building Technology Laboratory
Spring 2003

Assignment 2 Ventilation
Lab report checklist

Introduction Several paragraphs that motivate the report and describe its contents	_____	1
Wind-driven flow (balcony)		
Design and construction drawing or photo, choice of materials, dimensions, design criteria	_____	2
First-round airflow measurements with hotwire anemometer, displayed in an effective tabular or graphical format	_____	2
Analysis of data, including volumetric airflows and air-change rates	_____	2
Conversion of air-change rates to those you would expect in a real apartment, under one or more wind speeds of your choice	_____	1
Completion of the CONTAMW worksheet and design exercises	_____	2
Discussion, on the basis of CONTAMW simulations and, optionally, measurements, of the relative importance of the balcony, interior partitions, and rear windows in determining airflow through the apartment	_____	2
Owner's manual for the apartment with your balcony	_____	2
Ventilative cooling		
Description of your "water tank" enclosure drawing or photo, choice of materials, dimensions, design criteria	_____	1
Cool-down data and time constant for sealed enclosure	_____	2
Cool-down data, airflow data and time constants for two ventilative-cooling trials	_____	3
Estimates, via simulation or analytic prediction, of time constants for the three cases above	_____	2
Conclusions What you've learned about measurements, simulation, and how to use natural ventilation to cool buildings	_____	1

23 points maximum