

## Preface

This paper reports on the results of the investigations after the 1999 Kocaeli earthquake by the Joint Reconnaissance Team of the Architectural Institute of Japan (AIJ), the Japan Society for Civil Engineers (JSCE) and Japan Geotechnical Society (JGS).

The AIJ reconnaissance team investigated damages to buildings systematically in collaboration with Turkish universities. An inventory damage survey on approximately 2700 buildings was performed in Golcuk and Degirmendere to derive detailed damage ratios and their spatial distributions near the surface fault line in an academic point of view. On the other hand, systematic array observations of microtremors and aftershocks were also carried out in several sites of damaged regions to identify structural characteristics of soils and to estimate the site effects on the amplification of the main shock. The survey by the JSCE reconnaissance team covered wide areas, such as fault trace, seismic ground motion, bridges, railways, ports and harbors, industrial facilities and lifelines. The JGS team surveyed and analyzed on the damages to soil structures including the measurement of landslide into the Marmara sea. The second AIJ team focused mainly on the social aspect of damages and post disaster management.

The main results included in this report were not based on other references but directly derived from the field investigations by the reconnaissance teams. The original data from the inventory survey, figures and photographs in color version are installed in the attached CD-ROM, which are available as electric files. The authors wish this report be referred to not only in Turkey but also worldwide as an academic documentation, which provides precise records of damages due to the earthquake.

The investigation was successful on account of the cooperation and help of the professors, staffs and students of the Turkish counterparts. The national and municipal governments of Turkey, Turkish Naval Force and relative organizations were most generous and cooperative even during their emergency. Also the hospitality and cooperation of Turkish people was most touching. The authors would like to express their most sincere gratitude to the above people as well as their deep sympathy with the peoples suffered from affected by the earthquake.

This report is also published in Japanese version as well as in CD-ROM version from the Architectural Institute of Japan. The CD-ROM includes pdf files of all the manuscripts of the Japanese and English versions with original color figures and photographs.

Joint Reconnaissance Team of  
Architectural Institute of Japan,  
Japan Society of Civil Engineers and  
The Japanese Geotechnical Society

# Report on the Damage Investigation of the 1999 Kocaeli Earthquake in Turkey

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