

# Looking Toward the 21st Century

This issue marks the beginning of the fourth year of publication of *Civil Engineering Practice: The Journal of the Boston Society of Civil Engineers Section/ASCE*. This anniversary reflects the success of the Journal in capturing the spirit and substance of civil engineering practice and it represents the Society's continuing commitment of energy and resources to the Journal. As well, the Journal will continue to present articles that are comprehensive in scope while remaining understandable to the non-specialist. This issue is of particular significance, as we head toward the close of this century in one more short decade, since eight of the ten articles contained herein are focused on the geology of the Boston area and the effects this widely contrasting geology has on engineering works.

Currently, Boston is launching one of the most massive series of developments in the city's history. Key facets of this development are the depression of the Central Artery, construction of a third harbor tunnel and the revamping of the area's wastewater management system in order to clean up Boston Harbor. These projects represent a vast undertaking that will cost in excess of \$10 billion and employ more than 15,000 people over the next 10 years. It would be a mere understatement to say that all three of these projects will have far-reaching effects and benefits that will extend well into the 21st century. Due to their nature, all of these projects will require a high degree of geotechnical work.

The eight articles on Boston's geology were selected and adapted from a much larger unpublished work that is entitled, "Geology of the City of Boston, Massachusetts," edited by David Woodhouse and Patrick J. Barosh. The chapters included here were chosen on the basis of special interest to engineers and are presented as separate articles in the Journal. These articles begin with David Woodhouse's historical sketch, "The History of Boston: The Impact of Geology," on page 33. Other articles follow and include such topics as the fundamental geological characteristics of the area, geotechnical factors that bear on engineering projects throughout the city, discussions of the historical earthquake hazard and seismic-related regulations, issues affecting environmental projects and presentations of important information on major engineered structures that includes special emphasis on tunneling projects.

The overhauling of the area's wastewater management system is addressed by Donald R.F. Harleman in his article, "Boston Harbor Cleanup: Use or Abuse of Regulatory Authority?" Originally presented as a part of the Society's John R. Freeman Fund Annual Lecture, Dr.

Harleman presents a critique of the current plan to make the waters of Boston Harbor clean. As in any project with a price-tag in the billions of dollars, any disagreement as to how these monies are to spent will engender controversy. Professor Lewis Edgers, President of the Society, has noted that "the issue of advanced primary treatment and combined sewer overflow work on Boston Harbor versus secondary treatment as presently proposed is a complicated one." The Society, he points out, "has recently voted to support a study of these issues by the Water Science and Technology Board of the National Research Council." In addition, two congressmen from Massachusetts have taken an interest in reexamining the current plan. We hope that the Journal can become a forum of debate on this timely, important and sensitive issue.

In addition, in keeping with new developments in practice, an article by Fadi Karaa and James Hughes addresses how microcomputers, or personal computers, are affecting project management activities. Their discussion includes thoughts on determining whether such a personal-computer-based system would be advantageous for your firm and how to go about evaluating such a system.

We hope you will find that this issue of *Civil Engineering Practice* contains information that will help you understand and appreciate the manifold aspects of a wide range of civil engineering projects, as well as sustain your interest and provoke your thoughts. The Journal welcomes discussions on the articles published herein and invites readers to comment on this issue. Articles reflect the views of their authors and publication of any article does not represent endorsement by the Society. Let us know how we are doing and what you think.



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