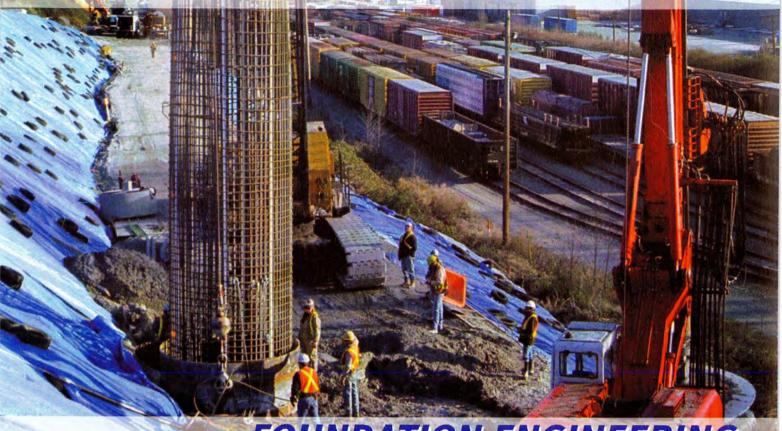
Proceedings of the 16th Annual Vancouver
Geotechnical Society Symposium







Vancouver, B.C. May 29-30, 2002

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Cover photo: Rapid Transit Millenium Line Credit: Derek Harris, Agra Foundations Limited



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The Vancouver Geotechnical Society (VGS), a local chapter of the Canadian Geotechnical Society (CGS), is a non-profit organization dedicated to the dissemination of geotechnical information for the local Civil Engineering community. In Addition to the annual symposium, regular evening seminars are held from September through May. For further information on the activities of the VGS, visit the VGS web page at:

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## Foundation Engineering - Preface

#### Mustapha Zergoun, Symposium Chair

It is a great pleasure and honor to introduce the 16th Annual Vancouver Geotechnical Society Symposium. This event follows a well-established tradition built on the willingness of the members of our local geotechnical engineering community to present highlights of their work and share some of their experience with their peers and other interested participants. It has also become a tradition to invite prominent keynote speakers to address the participants during the pre-symposium dinner and before the presentation of the case histories on the day of the symposium. We hope that the following proceedings will serve as a reminder of the various topics of discussions that would occur between the participants to the event.

We expect that the theme of the 2002 VGS Symposium, Foundation Engineering, will generate a lot of discussions. There is a vast technical literature on foundation engineering. However, data on experience, value judgments, and calculated risks are scarce. Arthur Casagrande noted the following observation in his 1964 Terzaghi Lecture (\*):

Unfortunately it is common practice in publications describing projects in applied soil mechanics to present a rationalized picture that has little resemblance to the truth about the actual approach followed in arriving at major design decisions. If judgment based on empirical knowledge played an important role in such decisions, why not admit it? If unknown risks or calculated risks were involved because of the large gaps in our understanding of the mechanics of soils, why not admit it? Authors who, a posteriori, try to rationalize their decisions or make theories fit the facts, merely reveal their limited grasp of the realities of applied soil mechanics. With distorted presentation of important case records they hinder rather than promote progress; and they mislead their younger and less experienced colleagues.

We hope that the 2002 VGS Symposium will help, in whatever modest way, to publicize the true nature of value judgment and calculated risk in foundation engineering. The practice of geotechnical engineering often encompasses a wide variety of skills including adequate subsurface investigation and ground profiling, clear understanding of soil behavior based on experimental and field observations, and judicious use of appropriate soil models. In addition to the above skills, the practice of foundation engineering often involves other professional disciplines concerned with the ground including, particularly, structural engineers. Consequently, a good and open communication between geotechnical and structural engineers is of paramount importance to successful foundation engineering design. Ideally, such communication would extend beyond the projects at hand and would develop into a mutual lifelong understanding and learning path.

The members of the 2002 VGS Symposium organizing committee wish to thank the many authors and the distinguished keynote speakers who dedicated valuable time from their busy schedules and provided the effort it takes to share their expertise and experience with the participants. We are also very grateful for the continuous financial support generously offered by the many sponsors and displayers that helped make this event a success. Most importantly, we are very grateful for the many participants who attended the Symposium.

The organization and successful unfolding of the 2002 VGS Symposium relied on dedicated individuals who voluntarily contributed their time and effort to complete numerous meetings and tasks. The participation of Farid Emadi, Sean Reilly, Debasis Roy, Scott Tomlinson and, Jason Warren is gratefully acknowledged. The contribution of other volunteers during the event is also much appreciated.

<sup>(\*)</sup> A. Casagrande, Journal of the Soil Mechanics and Foundations Division, Proceedings of the American Society of Civil Engineers, Vol. 91, No. SM4, Part 1, July 1965.