

THE EDITOR'S PAGEThe Things I Cannot Change

An alternative title to this editorial could very well be "Have we the time to make haste - slowly? Someone once said "God grant me the serenity to accept the things I cannot change, courage to change the things I can, and wisdom to know the difference".

Who would have thought a few years ago, that the "discontented young" could have such an impact on our social systems. One would think our social systems are "things I cannot change", but with concerted action, they have changed and are changing. While the results of social change may be seen from a reasonably distant point in time, to identify the change is however, more difficult. For instance, take the case of our Association of Ontario Land Surveyors. We have been making haste - very slowly. Surely, we have had many indicators of the identity of desirable changes, but we have not had the courage and wisdom to act concertedly with vigor and dispatch to recognize and implement those changes. Is the reason apathy? Or is it that the thought of the apparent effort involved in changing "the things I cannot change" is too overwhelming to be considered? Perhaps individually, in our comfortable practices, that may be so. One could point to the issues of the past few years, education, unification of the surveying profession, recruitment, public relations, coordinate control, discipline, the Surveys Act, etc. We have hasted slowly and time may be running out. The technologists and other professions are hasting rapidly to the point where we may be surpassed and left behind. The signals have been flying for a good many years. One particularly comes to mind. In 1958, Mr. H.H. Leeming, then Director of Engineering for Ontario Hydro addressed the luncheon meeting of the Annual Meeting of our Association on the topic, "The Surveyor and the Engineer". Excerpts from his address taken from the Annual Report are published elsewhere in this issue.

Once again, the forthcoming Annual Meeting is an opportunity to do our "thing". Let it be a concerted "Yea" to implement the desirable changes for which our Committee on Education has worked so hard and so long.

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THE SURVEYOR AND THE ENGINEER

Excerpts from the address given by H.H. Leeming to the Luncheon Meeting of the Association of Ontario Land Surveyors Annual Meeting in 1958.

Now, may I become a little more serious for a few minutes and talk to you on the subject of the Land Surveyor and the Engineer. We have many visual and written testimonies to the achievements of the land surveyor and the engineer of the Ancient World. Although the works of the surveyor, historically, preceded that of the engineer, we realize that as civilization progressed and structures came into existence, there has always existed a very close and essential relationship between the two professions. Throughout history it has been the part of the surveyor to open the frontiers of the world and the part of the engineer to develop and build as the requirements of civilization demanded. In my early days on engineering work that is between 1920 and 1930, surveyors did not have the modern equipment and air reconnaissance and transport facilities that you have today. How does the surveyor of today fit into the ever changing picture of engineering progress? Does the work of the surveyor stop at the establishment of the boundaries of the land required for these projects, or can the work of the

surveyor continue throughout the various phases of the engineering project? Let us consider what is necessary for the modern engineering project, and where surveying is necessary to site selection or location design and construction. The first step is a reconnaissance survey necessary for the selection of the most economical sites or locations. Nowadays aerial photography and photogrammetry greatly assist the rough ground work in the preparation of maps and plans for engineering steps. The study of the results of a reconnaissance survey will indicate which of the alternative schemes should receive a more detailed investigation. From the study of the more detailed maps and plans prepared from the results of the reconnaissance survey extended to the preliminary engineering stage, general lay-out plans, preliminary design and estimates are undertaken. Surveying does not stop here, for now the design lay-out from the drafting board must be marked on the ground. After it, control surveys must be run, grades established, etc. Surveys of this nature are required prior to construction to obtain the necessary final designs of the structures based on accurate topographical detail. These surveys must be of sufficient detail and accuracy to provide the information necessary for project planning and control, for the preparation of specifications and specification drawings.

When construction of the project is about to start, whether it be a power development or transmission line, etc., we find surveying in a major role. During construction there is a constant need for measurements both vertical and horizontal to control the building of the structures. Data is required by the engineer during the construction stage for the completion of construction details, the modification of design to meet changing physical conditions and for the lay-out of structures.

What is the relationship between the surveyor and the engineer in this picture? We, in the engineering profession, are vitally interested in anything which contributes to the effectiveness of the engineer. How can we make him more available? How can he give more time and attention to design and to construction supervision, and to the duties of Management? How can we achieve the ultimate aim of his academic training?

On the surveyor's horizon is the field of engineering surveys. As an engineer I readily accept the fact that cadastral surveying in Ontario is the unique field of the Ontario Land Surveyor. Many engineers do not concern themselves with land ownership and land boundaries. The engineer, however, must concern himself today with staying inside the limits of the lands and rights acquired for his project, and, therefore, welcomes the partnership of the cadastral or legal surveyor for that purpose. But, what about preliminary engineering, or, if you wish to call it so, pre-engineering surveys, design surveys, lay-out surveys, etc.? What should the engineer today do about engineering surveys? You will agree with me, I am sure, if I say that years ago engineering surveying was a fair proportion of the field engineer's work. Today engineering surveys by engineers should be limited, taking into account the new techniques, particularly when one considers today's need for technologists and specialists in the sciences and engineering.

If the engineer should not be doing his own surveying today, who should? As I look around, I feel I can safely say that you can relieve the engineer of a great deal of such work, but you must be experienced in such work. When we say that experience is a valuable asset in business and in other activities of life, we do not mean just casual acquaintance with events as they pass by. Experience is useful only if you have the capacity to learn from it, and to apply the lessons to the constructive benefits of yourself and the business, and I might add, to the benefit of other professions such as the engineering profession.

It has been my experience that our Ontario Land Surveyors have the capacity to do a good engineering survey job. In addition to their cadastral survey works, they have worked in harmony with our engineers and have been of great assistance to them professionally, that hardly anybody will move now without saying -- "Give me the engineering survey first".

Engineering is the controlling of the forces and materials of nature for the benefit, convenience, welfare and use of the human race. On the other hand, surveying is the knowledge and art of measurement. The evaluation of accuracy and the presentation of information for combining engineering and surveying, requires a far higher degree of skill than the mere use of instruments. It is in this realm undoubtedly that the land surveyor can establish his work as a professional man. Experience as a basis of professional status is not enough. You may find that the technology of measurement has progressed to the point where your technician is, or you yourself are, face to face with the mysteries of electronic computers and measuring devices.

Surveyors, when working with engineers should consider themselves professional, because engineering survey work closely parallels cadastral survey work. In many respects the work is mechanically identical, or nearly so. To do this the surveyor must have the respect of the engineers. I feel that both the engineer and the land surveyor can do more for his community than he is doing now; the engineer in the use of expert and judicious application of science and technology to the solution of engineering problems, and the land surveyor by broadening his field of operations. As an engineer, I respect your profession, but I could wish your services were more readily available.

..... The surveyor's education has to keep in step with the challenges of the times. To keep pace with the advancement of a progressive society, we must develop higher educational standards, higher ethical standards and a higher degree of professional competence. A couple of Sputniks and the recent Dudniks, have given our Western economic complacency a real jolt. It is not only now urgent, but also imperative, that all professional men achieve a real effectiveness in their specialized fields. The first step toward such an aim is the study of ourselves. such a self-study must not only probe day-to-day tasks of an individual, but also his attitudes, his hopes, ambitions, disappointments and his fears. To be effective, therefore, one must know oneself. A profession is made up of individuals. As the proportion of people in any profession increases in relation to other groups, and I understand your Association has practically doubled in members since the war, there is a tendency to neglect the individual. Another distinguishing feature of your Association is, I understand, that more and more of your members are in an employee and management status. I am sure you will be aware of changing characteristics in your Association, and that you will want, therefore, to take a new look at yourselves like we did, (the APEO, Ed.) to make the profession more effective. Some way must be found to attract young men to the romance of surveying; I do not mean that this should be for a couple of summers as a university student in order to pay university tuition fees. I feel that your Association must do all in its power insuring that surveying as a profession is one that deserves a lifetime of devotion and effort.

I am glad to hear from your President that the Canadian Institute of Surveying has made some progress toward establishment of surveying courses in the Ottawa universities with a curriculum to suit the needs of your profession. That is a welcome step in the right direction. We must constantly look ahead. Whether or not we ourselves will be here thirty years from now is of no concern, but the engineering and land survey

professions will, and what we do today will have a great bearing on what our professions will be like at that time; we must, therefore, look ahead and help ourselves move in the right direction.

Until you have swelled the ranks and broadened the scope of your profession, you must make do. The surveyor cannot stand still. Canada is on the threshold of its greatest development, and the surveyor must be in the vanguard of that progress.

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PROCEEDINGS OF COUNCIL

Meeting of October 9, 1968

Appointment of Secretary-Treasurer - It was resolved that A.F. Allman be appointed as acting Secretary-Treasurer, effective September 9, 1968, and as full time Secretary-Treasurer, effective October 1, 1968. Several motions were passed in regard to the mechanics of a change in Secretary-Treasurer, Resignation from Committees and appointment to Committees, Banking authority, etc.

Special Assessment - By-Law No. 92 - It was resolved that some 19 members who had not paid the special assessment to date be notified again by registered mail.

Group Insurance Plan - Council decided that President F.J.S. Pearce, M.N Simpson and J. Gray form a special committee to analyze the replies received from the members in the recent questionnaire relative to the new proposed plan.

Questionnaire on O.L.S. Issues - W.J. MacLean tabled a questionnaire setting out the current issues facing the Association to be presented to each candidate nominated for office in this Association's next election. Much discussion resulted relative to the pros and cons of such a commitment from those standing for election. Council agreed that membership were entitled to know more about the candidates and what they wanted to do for the Association if elected, but disagreed on subject matter and form of questions. The matter was referred back for further study and revision.

Buried Services - D.L. Humphries tabled a report on the problems of buried services related to surveying. Council referred this to the Hamilton and District Regional Group for comments, and further report.

Errors and Omissions Insurance - A verbal proposal from Dalton Insurance Agencies in Hamilton was discussed and it was resolved to ask the firm for a written proposal for study of Committee of Council.

Sessional Services - Council resolved that the Secretary-Treasurer be instructed to examine all Bills affecting the practice of land surveying in Ontario and if, in his opinion, legislation has been proposed that would affect the Association, he shall forthwith advise the President of same. Council also resolved that the Secretary-Treasurer be instructed to examine all legislation affecting land surveying duly passed by the Province of Ontario and shall arrange forthwith for a copy of each to be distributed to each member of the Association.

C.A. and C.E.D. Abridgement - It was brought to Council's attention, by W.H. Moffatt, that 1,000 copies of the proposed abridgement of court cases involving property, boundary disputes, etc., had been ordered from Carswell and Company and that printing was now in process.

Surveyors Act 1969 - W.F. Weaver reported on the progress of the Special Committee on Surveyors Act 1969, under Chairmanship of W.H. Williams. He informed Council