

# The History of the Association Of Ontario Land Surveyors

## Part V:

### The Bush and the Baccalaureate

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The alert planner will not be surprised at the advent of new tools. Rather, he will be acquainted with their development and awaiting their economic viability.<sup>1</sup>

In shaping a professional institution, education is one of the most important tools. The AOLS has appreciated this fact from the day of its inception. Throughout its history it has sought to accommodate new technology and professional diversity by continually altering and expanding its educational programs. Juxtaposing the Association's concern with education has been its struggle to maintain a balance between the academic and the practical. For longer than seven decades this was accomplished by a training system which allowed the candidate to acquire experience and academic credentials simultaneously. However by 1960 cadastral surveying had diversified to such an extent that it was impractical to expect candidates to acquire, in only four years, a grounding in both the scholastic and the practical aspects of professional land surveying.

In 1818 the qualification for the job of a surveyor was based on an examination by the Surveyor General to determine fitness and capability, and necessitated the depositing of a £50 bond. By 1849 the bond had been reduced to £25. The applicant was examined by the Commissioner of Crown Lands and was requested to produce a certificate of probity and sobriety. He had to show ability and produce and operate his own instrument; be adept in geometry, plane trigonometry and plotting; and be conversant with spherical trigonometry in order to establish meridians. Preliminary tests in geometry, trigonometry and logarithms were introduced in 1855. By 1859 geology had been added to the curriculum and the bond was \$1,000. Penmanship and orthography were added to the curriculum in 1887. For the DLS wishing to obtain his PLS no exams or articles were required. With incorporation in 1892 came the establishment of the Board of Examiners, thus taking surveyors out of the purview of the Surveyor General. Further curriculum expansion was undertaken in 1897 with the addition of geography, history, botany and forest cover. The articling period was three years. By 1897

the AOLS had recognised graduates of certain academic institutions such as R.M.C., Ontario School of Practical Science (U. of T.) and McGill. They were exempted from preliminary exams (ie. grammar, penmanship, arithmetic...) and the period of articles shortened to one year. They were still subject to final examinations which consisted of both a written portion and an oral exam before The Board of Examiners. Unfortunately the equation of one year's experience in the bush, plus a baccalaureate, often did not equal an Ontario Land Surveyor, and the term of articles was later expanded to two years.

By 1924 the academic area had expanded sufficiently that an intermediate set of exams was initiated. Concerning the practical aspects the requirement that the applicant operate his instrument was dropped and the necessity of possession of a standard measure was implemented. With the advent of good roads, the auto and the planner, subjects regarding town planning were added to the curriculum the subsequent year. At the Board of Examiner's suggestion spherical trigonometry was eliminated from the preliminary examinations and Junior Matriculation (Grade 10) became a requirement. By 1931 this was raised to Grade 12 and Grade 13 in mathematics.

The Report of the Council of Management, in 1946, notes that the Council bargained with the Department of Veteran's Affairs to secure recognition of apprenticeship to an OLS as "Training on the Job" so that veterans could obtain financial assistance. Council was under public pressure to admit persons into the profession. However it resolved that "...it would be wrong and not in the public interest, if, simply to meet a temporary public need, we were to let the barriers down ..."2 They did however submit a Bill to the House giving a shortened term of apprenticeship to veterans and a shorter term, by one year, to graduates of all universities in the Dominion of equivalent standing to those previously mentioned in the statute.

By 1956 admission to articles demanded that the candidate have achieved acceptance into the Engineering Faculty at the University of Toronto. The Committee on Legislation was actively amending the Land Surveyors' Act to again upgrade the standards and qualifications of the professional land surveyor while keeping in mind their goal of greater service to the public. Amendments changed the period of apprenticeship from

3 to 4 years, and for graduates, from 1 to 2 years. Because of the workload the Education Committee instigated changes which divided the final examinations into two groups of subjects, with each group being written at a different time, if desired. As the surveyor's role was expanding, academic requirements became essential. Many surveyors became detached from technical implementation, dealing more and more with management, system design and planning consultations, than with the execution of the field work. This created a demand for highly-skilled and well-trained staff who would successfully manage the technical facts of surveying.

Attempting to satisfy this need the AOLS, by 1968, had encouraged the development of technology courses in surveying at Ryerson and the Provincial Institute of Trades in Toronto, and worked with survey technicians and para-professionals for the development of the Association of Certified Survey Technicians and Technologists of Ontario which was to offer the surveying technicians an association to provide certification of proficiency and standing. Whether this has been or will be realized in the future is still a subject of discussion by technicians and professionals alike.

This decade witnessed other radical changes in the education required by an OLS. The contemporary system for education of professional surveyors suffered from two major deficiencies: firstly, it was unreasonable to expect an aspiring candidate to achieve both academic and practical proficiency in only four years; secondly, neither the articling system nor the engineering facilities in Ontario were schooling candidates for survey disciplines other than cadastral surveying.

To resolve this in 1961 the Association approached the University of Toronto regarding the establishment of a survey science program. By 1972 it became a reality. The first graduating class appeared in 1976 and will come before the Board of Examiners in 1978. Remnants of the former system are evidenced by the articling period of two years and the fact that candidates are required to submit themselves, notwithstanding probity and sobriety, to a professional exam before the Board of Examiners. Hopefully these professional requirements will result in a return to the balance between the bush and the baccalaureate.

## FOOTNOTES

1. Pg. 301, Manual of Photogrammetry
2. Pg. 38 (1946) AOLS Reports

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