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“The founding of the original Canadian Society of Civil Engineers”

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Even in the mid-to-late 1800s there were relatively few in Canada who called themselves 'engineers' - just a few dozen at the start of the railway boom, and a few hundred by the time the CPR reached the West Coast thirty years later. Most practising engineers at this time had been trained through apprenticeships rather than in technical schools or universities, and many had come from Britain or the United States. Prominent among them were Thomas Keefer, Sandford Fleming and Casimir Gzowski, the latter two capping their careers by receiving the accolade of knighthood. Keefer was made a Companion of the Order of St. Michael and St. George.

Fleming was one of the founders of the Canadian Institute - in Toronto in 1849 - as a professional society. Its initial membership included architects, surveyors and engineers and its original objectives were the encouragement and general advancement of the physical sciences, the arts and manufactures. But the Institute's early years were difficult ones and it was forced to broaden its interests and its membership in order to survive - which it did. It went on to add the word 'Royal' to its name.

Also in the years prior to Confederation, an Association of Land Surveyors and Institute of Civil Engineers was incorporated under the laws of Upper Canada. It was, however, short-lived. After Confederation, in 1881, a Bill to regulate the practice of civil engineering was introduced into the Ontario Legislature, but it lacked support and never became law.

Among those who promoted the idea of founding a professional engineering society around the time of the Ontario Bill was E.W. Plunkett. He was not successful but, over the next several years, a number of his colleagues also tried. One of them, Alan MacDougall, initiated meetings in Montreal, Toronto and Ottawa. At one of these - in Montreal in March 1886 - a motion was passed that a society be formed to include members from all branches of engineering. The provisional committee set up in November 1886 to carry out the establishment of the Society met in Montreal in January 1887, and again in February, to consider membership applications. By the official date of establishment - 24 February - 288 members in all classes had been elected. At this time, also, it was decided to apply to the Dominion Government and the Parliament of Canada for a Charter. This Charter received Royal Assent on 23 June 1887. The initial objective of the new Canadian Society of Civil Engineers was "to facilitate the acquiring and interchange of professional knowledge among its members and to encourage investigation in connection with all branches and departments of knowledge connected with the profession."

Keefer and Gzowski were founding members of the CSCE, whose headquarters were to be in Montreal, with Keefer also serving as the founding president. Gzowski was the third president, and the only one to serve in this position for three consecutive years. The establishment of this Society obviously benefitted from the entry of British Columbia into the Canadian Confederation and from the construction of railways to the East and West Coasts. However, Keefer in his address to the members of the Society at the completion of his year in office elaborated on its origins. He said:

"I am unable to say when the first agitation for the formation of a Canadian Society of Civil Engineers began. I know it was a subject of discussion among engineers, and I believe also of newspaper communications by engineers, long before any concerted action was attempted ...

"I think the agitation dates from the formation of the Land Surveyors into a close corporation. Formerly, the surveys in connection with the right of way upon canals and railways were made by the Engineers engaged upon the work, as well as the topographic surveys connected therewith. Engineers out of employment were prohibited from practising as Land Surveyors, without first undergoing an apprenticeship, as well as passing an examination. On the other hand, Land

Surveyors, whether competent or not, could practice as Civil Engineers. It was natural, therefore, that a feeling should grow up that not only was a standard of qualification required, but that the profession should be put on the same footing as land surveying and be restricted to those who were qualified by law; but whenever this was proposed, the general sentiment was found to be against it. This was probably due to the knowledge that the great Institution, organized at the Kendall Coffeehouse in Fleet Street on 2nd January 1818 – of which Telford was the first president – had proved a magnificent success without protection; as well as the reflection that the founders of the profession in Great Britain and the United States were born Engineers, and sought only a free field and asked no favours."

(This historical note was based on the paper ***THE ORIGINAL CANADIAN SOCIETY OF CIVIL ENGINEERS*** by Andrew H. Wilson, which appeared in Volume 1 of the PROCEEDINGS of the Canadian Society for Civil Engineering Conference held at Sherbrooke, Quebec, in 1997. The first presidential address by Thomas Keefer has been included in its entirety as Appendix B of Peter R. Hart's book ***A CIVIL SOCIETY: A BRIEF PERSONAL HISTORY OF THE CANADIAN SOCIETY FOR CIVIL ENGINEERING*** published by the Society in 1997.)

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