

GEORGE S. FRATER

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SENIOR CIVIL ENGINEER

PROFESSIONAL PROFILE

Codes and standards activities related to the steel industry. Detailed structural design of heavy industrial facilities, buildings (airport & hospital) and smelting furnaces. Construction support work, i.e., steel erection, monitor and reviewer of contractor submissions on subway tunneling project. Prepared investigative reports for industry sponsored research and provincial transport ministry. Design of test rigs and instrumentation for laboratory testing of large-scale research specimens.

EMPLOYMENT HISTORY

Canadian Steel Construction Council, Markham, ON

12/02 – 05/19

Codes and Standards Engineer

- Oriented in code and standards development work and fire protection engineering after eight years in engineering consultancy firms as a design engineer.
- Membership on building code and standards committees defending the interests of the steel industry and the use of steel in building construction.
- Sorted out code-related problems for steel industry firms and continually fielded inquiries from engineers, architects and other building construction participants.
- Provided and prepared webinars and seminars to professional audiences (architects, engineers, and building officials) and university/college students.
- Prepared steel industry fact sheets and produced a building guide to amalgamate a range of cold-formed steel construction assemblies.
- Other publications include a 60-page guide booklet entitled, Fire Facts for Steel Buildings, published by the Canadian Institute of Steel Construction (CISC) and articles dealing with fire protection of structural/cold-formed steel in the Canadian Consulting Engineer (May 2006 and May 2008), CISC's Advantage Steel (Spring 2011) and Construction Canada (March 2011).

RELEVANT EMPLOYMENT HISTORY

HATCH, Mississauga, ON

01/95 – 06/00

Senior Civil Engineer / Civil Engineer – structural

- First two years in a specialized smelting furnace group (steel, nickel & copper) that entailed design engineering along with a significant amount of construction work during furnace rebuilds.
- Detailed structural engineering design work along with construction work on small and large-scale projects such as:
 - Chaparral Steel's Meltshop building
 - Toronto Transit Commission's Sheppard Subway tunnel project
 - Investigation study for Ontario Ministry of Transportation's High Mast Lighting installations
 - Secondment to Atomic Energy of Canada Limited to work with the Pickering 'A' Return-to-Service project team

TEACHING AT HUMBER COLLEGE (THREE PART-TIME TEACHING CONTRACTS)

- 1st year Methods of Construction course (two classes) 01/20 – 04/20
- 3rd year Structural Steel Design course 01/04 – 04/04
- four Civil Technology courses (second and third year courses) 01/94 - 04/94 & 09/94 - 12/94

OTHER RELEVANT EMPLOYMENT HISTORY (CONTRACT PROJECT WORK)

CIVIL ENGINEER – STRUCTURAL 3/02 – 11/02
SNC LAVALIN ENGINEERS & CONSTRUCTORS, TORONTO, ON

- Detailed structural engineering design work on a Sulphuric Acid Plant project in Bandirma, Turkey.

CIVIL ENGINEER - STRUCTURAL 08/01 – 03/02
ONTARIO POWER GENERATION, TORONTO, ON

- Structural assessment reviews and drawing preparation of Nanticoke and Lambton fossil power plant lifting systems and access platforms for code compliance.

CIVIL ENGINEER – STRUCTURAL 11/00 – 08/01
CANRON CONSTRUCTION CORPORATION EAST, TORONTO, ON

- Structural steel connection design for hospital building (New York City) and Pearson International airport terminal building (Toronto).

CIVIL ENGINEER – STRUCTURAL 08/00 – 10/00
R.V. ANDERSON ASSOCIATES LTD., TORONTO, ON

- Structural and architectural inspections of school buildings (Toronto District School Board Facility Survey).

RESEARCH ENGINEER 1993
TNO BUILDING AND CONSTRUCTION RESEARCH, RIJSWIJK, THE NETHERLANDS

- Industry sponsored research on Fibre Reinforced Composite Slabs (4 months, Jan. 1993 to April 1993).

RESEARCH ENGINEER 1991 – 1992
DELFT UNIVERSITY OF TECHNOLOGY (FACULTY OF CIVIL ENGINEERING, STEVIN LABORATORY) AND TNO BUILDING AND CONSTRUCTION RESEARCH, DELFT & RIJSWIJK, THE NETHERLANDS

- Industry sponsored research on Semi-rigid Connections Between I-beams and Tubular Columns (15 months, Sept. 1991 to Dec. 1992).

EDUCATION

- Ph.D., University of Toronto, Civil Engineering
- M.A.Sc., University of Toronto, Civil Engineering
- B.A.Sc. (Honours), University of Toronto, Civil Engineering
- C.E.T. (Technician, Honours), Humber College of Applied Arts and Technology, Toronto

PROFESSIONAL AFFILIATIONS (PRESENT & PAST)

- Professional Engineers Ontario (licensed since September 12, 1995, #90417908)
- Ordre des ingénieurs du Québec - Temporary License (project work between September 24, 1996, and October 5, 1998, at Québec Iron and Titanium Ltd.)
- Humber College Civil Engineering Technician/Technologist Advisory Committee (1996 to 2006)
- Natural Sciences and Engineering Research Council - Scholarships & Fellowships Selection Committee for Engineering (activity during January & February, 3 years, 2000 - 2002)