

James D. Henderson, P.Eng.

Jim was born in Edmonton in 1937. Soon after birth the family moved to Peterborough, Ontario and then to Winnipeg. It was in Winnipeg that Jim received most of his public schooling; finishing high school there. He immediately enrolled in engineering at the University of Alberta in Edmonton. However, the U. of A. lacked a mechanical engineering program at that time and Jim transferred to the University of Saskatchewan in Saskatoon where in 1953 he graduated with a Bachelor's Degree in Mechanical Engineering in a class of 17. He was fortunate to be one of two graduates hired by H.H. Angus Consulting Engineers of Toronto. There he spent 2 1/2 years as a junior design engineer honing his craft.

In 1956 he returned to Edmonton with Siemens Engineering. That did not work out and he went out on his own as J.D. Henderson & Associates. This venture lasted for only 9 months however, and he sought employment with Associated Engineering. That too was short lived and 2 months later found him back out on his own.

A small design project for a United Church in Camrose allowed J.D. Henderson & Associates to restart and it flourished until 1964. In 1964 Jim dropped the associates and continued for 30 successful years as J. D. Henderson Ltd.

Most of Jim's career was involved with what could be termed 'straight stick' mechanical engineering; mainly in the heating and ventilating industry. When Jim started out, the craft of 'consulting engineer' was in its infancy in the HVAC market. Most architects would approach equipment manufacturers directly for H & V needs. These firms would lay out the heating and ventilating plant and supervise the trade contractor in its installation. One of the first 'consulting' projects Jim got to work on was the Workers Compensation Board building in Toronto while at H.H. Angus.

Jim recalls the advent of 'air conditioning' in "Toronto the good" in the mid 1950's. Public bars (and TV) were starting to become popular. It was considered 'cutting edge' if the bar had a 10 ton packaged upright air conditioner in it. There was no such thing as central air conditioning. Jim recalls the HVAC in the old Strathcona High School - a large, reverse return hot air boiler with wooden dampers controlled by a Johnson Regulator ram. Heating was by gravity shafts and air conditioning was 'opening the windows'.

Specifications, in those days, were not much more than a scope performance design narrative. Suppliers and contractors were to meet the general intent of the operating design. ASHRAE, or rather ASHVE handbook standards were skimpy to say the least and crafted largely around proven equipment suppliers' systems such as Carrier, Trane, etc.

Gradually, government insisted on more content and detailed specifications evolved. Sadly, the consulting engineer's role got removed from total project control to design and specification production with the inspection portion being diluted with so-called commissioning agents.

Notable project in Jim's repertoire include the University of Alberta Arts Building renovation, the Confederation Life building on 101 Street and Jasper and the Wawanesa Insurance Building on 107th Avenue. This latter building is believed to be one of the first in Edmonton to use induction ventilation and heating.

Induction systems had been introduced as ideal hospital h&v systems to introduce fresh air quietly and conditioned into patient wards. They were soon being marketed to office buildings. Jim tells of the early induction systems being so quiet that sound could be easily transferred between offices through the pipe and ductways along the exterior walls. A favorite trick was to plug enough of

the induction nozzles with wooden pegs to create enough background air velocity noise to overcome the problem.

Jim's firm tackled interesting projects outside the norm. One such project was an air injection system into the Red Deer River downstream of the Dickson Dam. This was necessitated by the very low flow rate of the river in winter and the resultant organic decay and oxygen depletion killing off the fish. Another was the cooling design of Henry Singers Menswear in the old Birks Building. Here, the lighting system consisted of 50,000 watts of pot lamps creating a huge cooling load requiring tons of additional cooling than would normally be supplied for the same office space.

Jim was involved in the design of Meadowlark Shopping Mall, the first fully enclosed mall in Edmonton. A 'fast-track' project, the design had to allow for a 7 month construction schedule. Essentially a series of cinder block boxes, it got labeled the air conditioned mud hut. Another interesting project was the Grierson Centre renovation. Jim was offered two inmates to assist in completing several tests /measurements on the effectiveness of the old plant. He later was told they were both murders - a comforting thought.

Jim was able , during his career, to contribute much back to his profession. He joined ASHVE in January of 1956 and was promoted to 'active' member in February, 1988. He is now a Life Member of both ASHRAE and APEGGA. He served on several committees in APEGGA including chairman of the consulting perfection committee, professional affairs committee and the disciplinary committee. He was active in the Consulting Engineers of Alberta for many years and a member of the Engineering Institute of Canada.

In the Northern Alberta Chapter of ASHRAE, he served as special events chairman in the early years of the chapter. Golf is his passion and he and Gerry Law held many successful tournaments in the 60's. Jim is a member of the Windermere Golf and Country Club and has played competitively both in Alberta and Canada on the Senior Men's circuit for 10 years. He also enjoyed hunting both game and migratory birds; although he admits to being in 'fourth phase' hunting now - just watching. When not involved in the above areas he enjoys camping and travelling with his wife, Joan.