

# **My Professional Career**

**Part 3 – (1978 - 1983) – Calgary, Alberta.**

**By Jacob A. de Raadt, P.Eng., MBA.**

**SDG**

**(Completed 2020-07-30)**

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Once again, dedicated to those who would care to know, and to all of the younger generation, even my grandchildren, as a tool in mentoring, learning and profiting – because they may otherwise never realize how things were done before, like when I graduated in March 1966 (see above).

Also remembering those who, during these years in Alberta, also suffered from the outcome of economic declines (not much different from the current one) caused by politics, greed and ignorance, but of which the primary cause is and remains the Lord God in heaven, whether this is acknowledged by them or not.

## Chapter 1 – Resident Engineer at Reid Crowther & Partners Ltd. (1977-1979).

In May 1977, as mentioned toward the end of Part 2, Mr. Ed Tahmazian, P.Eng. promised to hire me for RCPL, with an expected work starting date “by the end of the year”. The Canadian immigration visas that we received as the direct result of this promise, were dated 22 July 1977, issued at London, England. They were valid till the end of the year, and so we had to arrive before that date. We arrived on 6 December with CP Air’s Boeing 747 named the “Empress of India”, and it was abnormally cold (-32°C). Some Calgarians on the plane had commented: “It’s much too early to be that cold!” when that news was announced by the Captain.

On arrival at the brand new (and actually incomplete) terminal of Calgary Airport, Richard James, P.Eng. (sent by Ed), met us on behalf of the firm. We came through Customs at an airport that had been officially opened a week or so earlier, but it could hardly be considered as completed. There were temporary lanes that we had to negotiate with our hand luggage, passing lots of unfinished drywall. That day, Richard left us while we were picked up by Joe Boone (brother-in-law of Herman Heikens) and his sons, who brought us to a house that he had already organized renting at 7735 Bowcliffe Crescent NW, in the former Town of Bowness that had been annexed by the City of Calgary in 1964. Richard became my colleague on the next Monday 12 December, but then left RCPL around the end of March for the City of Calgary Transportation Department. Later, I met him once or twice at Rocky Mountain Plaza, but he joined the BC Ministry of Transportation (MoTH) in Victoria, (where I once phoned him for input on a detail at Sparwood in 1982), and also when I applied for a MoTH job in Victoria in 1986 and had an interview with Steve Reynolds, P.Eng. In the summer of 1990, I met Richard again during an Open House for various Nanaimo Bypass proposals. I then worked for Crippen Consultants (but sub-contracted for 3 months to Chatwin Engineering in Nanaimo) on the functional planning study of the north end of the (Inland) Island Highway project (Highway 4 to Menzies Bay); Richard had been Regional Manager of Design and then Project Manager for the Island Highway Project, in the “Major Projects Section” at MoTH. Shortly after that, I read that Richard had started his own consulting firm and was Secretary of the ITE Vancouver Island Section. In the mid-1990’s, he wrote an analysis in the ITE Newsletter about a pedestrian overpass at the east end of the McKenzie Avenue Interchange project, **added** to what had been designed at Crippen in 1991/22, when MoTH had “outsourced” its Project Management function to UMA’s Victoria office.



After some hours of documentation at RCPL by Miss Gerry van Tighem (i.e. registering for income tax, unemployment insurance, timesheets, CPP, the firm’s pension fund and a number of other things, all explained in a very nice RCPL Brochure dated October 1977 **at left**), I started to work for a short while on the design of civil services for an industrial land development on 12 Street SE, a City project located directly adjacent to the NW quadrant of the proposed Deerfoot Trail / Glenmore Trail interchange. This area became “**Riverview Industrial Park**”. During my 21 months at RCPL, after completing much design work on the freeway project itself, I also designed streets and civil services for a similar development project in the SW quadrant of that interchange, near Heritage Drive SE, and I also did some other minor projects, one of them in British Columbia.

To explain the interrelationship between these projects, I will now describe a particular work item for the Deerfoot Trail freeway, as well as the second industrial land development, now called “**East Fairview Industrial Park**”, another joint venture between Cominco and the City. This was a concrete stormsewer (1.8m x 1.8m box culvert) that crossed Glenmore Trail through an already existing 11 Street SE underpass structure (i.e. without a road). Two existing utilities had to be cross-

sed: a gas main and a large watermain. This stormsewer would drain a large area of industrial land, and could only be installed below these pipes. The design of a “transition section” was needed, with complicated detailed flow calculations. I used information from my University of Pretoria textbook<sup>1</sup> (*Engineering Hydraulics, ed. Hunter Rouse*, published in the USA by Wylie, 1961) for the complex calculations of **transition flow**, avoiding critical flow conditions. The gradient of the floor of the culvert had to remain constant. I realized that this type of design was not common in Calgary at the time, nor anywhere else. The (temporary) south end of this box culvert was at an east-west fence near the south limit of the Deerfoot Trail freeway project. Preliminary design for the next stage of the freeway layout (to a point somewhere south of the Anderson Road interchange) had already been submitted and given some level of approval; that was not of my concern at all. I also met a fellow South African, Ian Williams, P.Eng., who had come from Scott & De Waal, Pietermaritzburg, (via Edmonton).



Concrete box culvert transition section, looking southwest, and note that the watermain is suspended by a beam.

Looking south toward the kink in the box that continued south toward Heritage Drive, with a temporary outlet.

**In Retrospect:** Unexpected (politically motivated?) delays of the detail design phase of Deerfoot Trail beyond Heritage Drive SE likely first caused **(1)** my transfer to the Municipal Engineering Section, where I sometimes felt like a fish out of the water, with many unknown things and a less cooperative supervisor, so that **(2)** I was eventually let go during the end of the summer of 1979. Though hired as a “Resident Engineer” (a.k.a. Transportation Engineer) for highway construction supervision work, I did much more **detail design** than **site supervision**, and before any work thing could be supervised, the design of the section between 17 Avenue SE and Heritage Drive SE had to be completed and tendered. Drainage systems that ended up close to the Bow River needed concrete headwalls with slots for railway ties (to be placed into them for frost protection, without impeding minor winter flows), and heavy duty cast iron Armco<sup>2</sup> sluice gates to prevent backflow. I learnt that with a Chinook wind, a snowstorm of the previous day might result in all water rushing down the catchbasins, a lot of slush on the roads, warm temperatures and no remaining snow, even in the backyard of where we lived. During our six years in Calgary, we actually never experienced a “white Christmas”. All storm drainage calculations had to be submitted and approved by an engineer at the City of Calgary initialed “Z.Z.” Like Richard James, he worked at Rocky Mountain Plaza, an office building directly west of the old sandstone City Hall.

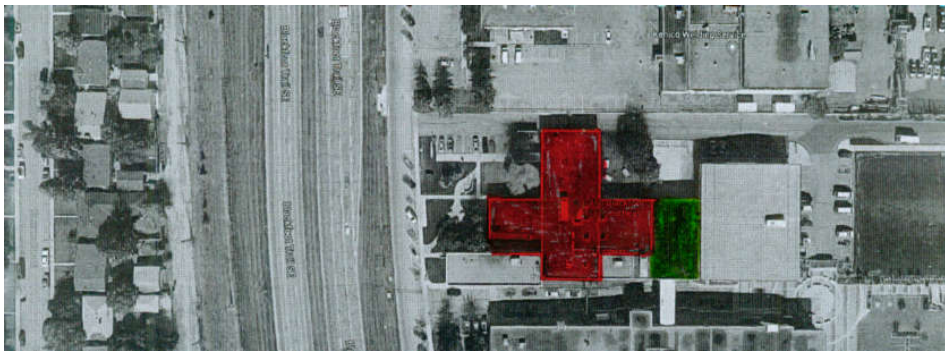
<sup>1</sup> I obviously only started this design work once all our “goods to follow” had arrived - one medium-size timber crate and two pallets with four grease drums each. These arrived by train, ship and train (from Pretoria via Durban, Yokohama and Vancouver) during the second half of March 1978, and we then had everything placed into the garage of a house that we had just purchased to avoid additional moving costs out of the rental house. There were no containers in those days; our belongings had left Pretoria by rail and had sat on the Durban quay till Christmas 1977.

<sup>2</sup> I liaised well with Ron Riseborough, Western Canada director for Armco. I later learnt that he was an “Armco icon”.

The US Consulate was also in Rocky Mountain Plaza, 8<sup>th</sup> floor. In 1981, we went there to apply for visas to visit my brother Arie in California, which we did in July while Lydia's parents agreed to look after our children.

On arrival, I was assigned an outside office in the NW corner of the building. This had been empty for a while, and was full of "stuff". I was obviously unfamiliar with the set-up of federal, provincial and municipal requirements, but had an advantage that all designs had to be in "metric". So I had to read up in a pile of documents, including the (blue) 1975 RTAC Metric Roadway Design Guidelines, the City of Calgary's roadway design standards, the "Calgary Storm Drainage Study" by Montreal Engineering (or was it already called Monenco?) and two books on safety barriers: (1) the small AASHTO "yellow book" and (2) the large purple "National Co-operative Highway Research Program" report on traffic safety barriers – on which this "yellow book" had been based. I used all these publications extensively for my work. The Deerfoot Trail project was funded by Alberta Transportation, and had to meet all their requirements. It was not the very first metric project in Calgary; improvements on McKnight Boulevard NE, directly south of the old terminal of Calgary International Airport, had been designed in metric (I do not remember by which firm) and Clarence Katzenberger CET often reviewed the "office set" of that project's as-built drawings, to try and envisage (and then duplicate) an "existing practice".

For the municipal engineering work, I first reported to Avtar S. Gahunia, P.Eng., whose office was next to mine, with Ed Tahmazian next to him, then Mike Strong, P.Eng., then the secretary/typist Ms. Famida Esmail, (who had come from Uganda when Idi Amin threw out all the Ismaelis) and in the SW corner was Bob Aitken, P.Eng. who supervised both Ed Tahmazian and Mike Strong. The office of Walter Werenka, P.Eng., head of the Municipal Engineering Section, was somewhere else; I first met him during RCPL's Christmas Party, at the Glencoe Club, after I had worked for one week. He told me then that he had just completed 25 years with the firm. Lydia and I met many people at that occasion. Mr. Bob Shortreed, P.Eng. was the Office Manager, and his office was on the other side of the reception area. In that area was the office of Miss Gerry van Tighem, the firm's "spinster accountant" and notary public, whom I sometimes used to witness documents. In the middle of the building were many cubicles with partitions, and in the open area were layout tables that had been made from sawhorses and plywood boards. On the south leg was the office's mail room and print shop, with access to a basement where all the firm's previous projects' as-built drawings existed, some of them under the former name "Haddin, Davis and Brown Co. Ltd." When some detail design on the long-awaited Deerfoot Trail extension was started in the summer of 1979, Mr. Werenka referred me to the old archived drawings there – particularly for stormsewer drawings from the Fairview neighbourhood. These stormsewers crossed the old abandoned railway line south of Cominco's silos at Heritage Drive. Vehicle parking was at the rear and along the driveway on the north side of the building. On completion of the building addition, I moved into a cubicle in that area, which had a single connecting aisle to the old building.



7410 Blackfoot Trail SE, Calgary.

The **red** shaded building above was RCPL's office when I arrived, while the **green** shaded addition was started and completed during the summer of 1978, for housing the firm's municipal and sanitary sewerage divisions. The building is currently a college, with several other newer additions and floors.

So in December, I worked for a single week that included orientation, attended the Christmas party, worked another week and then had a week of vacation, obviously because the whole office closed down. Deerfoot Trail design had already started on **Contract 7a** before my arrival, so I obviously did

not do much work on that north half of the project, except some minor road design, stormsewer design, adjusting with what the landscaping architects wanted, and started the safety barrier design. I later did some redesign for specific items on Contract 7a, which went out (by **revisions** and by **addenda**). Most of the design drawings were “in some state of design or drafting progress”, by either Ian, Richard, Clarence, Janet Farmer, Milton Carrasco or Mario Stamm. I later did much more work on the south half of Project 20567, because some colleagues left RCPL. After the first week of January, I noticed that all my colleagues received a pay raise, but not I; my hiring salary of \$ 22,000 p.a., (= Ed Tahmazian’s May 1977 pledge of “somewhere between \$ 20,000 and \$ 24,000”, stayed the same for me for all of 1978. I felt this a bit unfair, but did not mention it. As an aside, we had an “every third Friday off” system in Calgary, which is an “oil patch custom”, and that was appreciated.

On 18 January 1978, on the suggestion of Ed Tahmazian, I attended the first of many ITE Section meetings. The 17 men who attended started to organize the annual District 9 (Canada) Convention that June, a “**first time**” for Calgary. In South Africa, with the NITRR, I had already read “ITE Journal” and was aware of the international organization, and that Kobus Pienaar (MB&S) and Dr. Dehlen (NITRR) belonged to it. See (**below**) how efficient – and fast, within two days – the secretary, Nick Finn, P.Eng. (from Barton-Ashman Consultants) was by sending out Minutes after the meeting! Ed Tahmazian, Richard James, Ian Norris, P.Eng., Bernie Smira, P.Eng. and I made up the “**RCPL contingent**” that evening; Al Swanson, P.Eng. and John Gill, P.Eng., later became my co-workers at UMA. Ed always suggested that new employees become members. In the winter term of 1979, I took a graduate course at the U of C with prof. Michel Sargious, P.Eng.

20 January 1978

INSTITUTE OF TRANSPORTATION ENGINEERS - SOUTHERN ALBERTA SECTION

Minutes of meeting held on Wednesday, January 18, 1978 at the Peking Duck.

The following were present:

Ed Tahmazian	Richard James	Rien Scheffer
Doug Leibel	Michel Sargious	John Gill
Frank Grigel	Chan Wirasinghe	Dan Bolger
Ernie Orford	Jacob de Raadt	Bernie Smira
Geza Solty	Ian Norris	Al Swanson
Nick Finn	Don Ferrier	

Topics discussed were:

1978 CITE CONVENTION PLANNING - PROGRESS

Social Committee

Don Ferrier gave a report. The main points were: - the band for the barbeque is lined up, but not yet fully booked (if anyone has any good ideas for a band).  
 - Rockyview Park is provisionally lined up as the barbecue location; Frank Grigel suggested trying Highfield Tree Farm.

(Rien Scheffer, P.Eng. had his own consulting firm already, but he moved to St. Albert soon thereafter.)

During my six years in Calgary, I was a fairly regular attendee of the ITE meetings, at various venues all over the City, and sometimes at the U of C. But in June 1978, I did not do much at the Convention, except attending

the technical sessions<sup>3</sup> and some ushering at the Trade Show in the downtown Convention Centre. Lydia and I also went to the fancy barbecue at Highfield Tree Farm, which was the first real “western” affaire we had ever experienced, with Mayor Ross Alger presenting white Stetsons to all the “big shot” out-of-town dignitaries.



I applied for Associate Membership of ITE in early April, and it took the normal long process to get approved. After three South African endorsements had been received (from Dr. Dehlen, Mr. Bergh and Mr. Sturgess), my membership no. 10690 was granted on 11 October 1978. I always found this a good organization with an excellent magazine, and made use of two opportunities to write and present papers for its District Conventions: at Halifax, Nova Scotia (see below) in 1980, and later at Sacramento, California, in 2005.

On 16 March 1978 already, Mr. Dan Bolger, P.Eng. of the City of Calgary Transportation Department sent me an abstract of a paper for the upcoming Calgary Convention, with the title “Planning for Pedestrians”, by Larry Sheridan of the IBI Group of Toronto. Dan sent an (English) copy of my abstract to the SAICE Con-

vention (See “Part 2”) to Mr. Sheridan, and a request to both of us to contact each other on a possible joint presentation! I declined that kind suggestion: (a) My views would not have fitted in an Alberta environment; the topic (with the following words in the first paragraph: “**The purpose of this paper is twofold: First, to explore a conceptual context for improving the pedestrian built environment; and second, to examine the techniques for obtaining the data base required for adequate planning and design required to achieve a better and more cost-effective pedestrian environment in Canadian cities**” was much too vague and theoretical; and also: (b) I was still smarting too much of my painful “**impotence**” (for lack of a better word!) to do my work at Scientia that had ended in November.<sup>4</sup> There would be more opportunities later, I realized; and by the way, Deerfoot Trail had obviously no pedestrian component at all. I also had a good relationship with Dr. John Morrall, P.Eng., at the U. of C. which I kept up somewhat over the years during visits to Calgary.

(Jumping ahead a little bit, when we moved to Whitehorse in the fall of 1983, I became the only Canadian ITE member north of 60. The people at ITE’s Head Office in Washington DC did not know where to put me in the annual Membership Directory. Innovatively, they created a country named Yukon, placing it after Yugoslavia! This was shortly before Mr. Ted Dillistone, P.Eng., City Engineer of Yukon Territory’s capital, joined but then moved to Campbell River B.C. where he remained till his retirement. At one or other occasion, I confronted Tom Brahms from ITE Head Office with this obvious glitch. Returning south to BC from Yukon, I sometimes attended informal ITE meetings in downtown Vancouver, and then the 1997 Quad Meeting in Vancouver.)

But in 2007, when working for ADOT in Arizona, I became completely disgusted by an obviously “**non-peer reviewed**” article in ITE Journal (comparing traffic safety between intersections with roundabouts and those with traffic signals in Las Vegas, Nevada). Lydia and I decided to visit Las Vegas for two nights, where I conducted thorough personal “site inspections”, the results of which seemed to shred the article’s recommendation<sup>5</sup> to pieces. I then wrote a “Letter to the Editor” that was published “**verbatim**”, see the **next page**. When it had

<sup>3</sup> The conference attendance was 111, of whom 51 were from Alberta, of whom 37 were from Calgary!

<sup>4</sup> Larry’s presentation only mentioned the word “**safety**” 4 times and “**safe**” twice, as unimportant in the extreme.

<sup>5</sup> This paper had already been presented at a Conference in Australia....! See the **following page** for my letter.

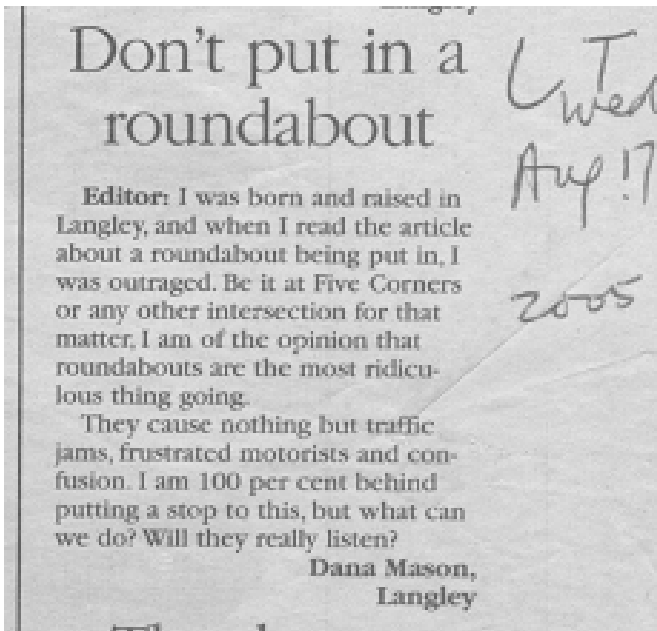
The Editor,  
ITE Journal.

Reading the article by Nambisan and Parimi in the March 2007 *ITE Journal* ("A Comparative Evaluation of the Safety Performance of Roundabouts and Traditional Intersection Controls") left some questions in my mind. While vacationing in Las Vegas last week, I decided to check out five of the six roundabout intersections as well as two of the three major signalized intersection "comparables", walking around and taking many photos. I also viewed and printed copies of all the other through google maps. What follows are my comments.

1. It seems somewhat inappropriate to compare crash statistics between existing (Major) roundabouts in a fairly new very upper high-class planned neighborhood development (= Summerlin) and existing signalized intersections in a less than middle class old run-down grid pattern urban arterial location close to downtown with school and church zones around the site (within 2 miles of I-15, on the "wrong side of the track" near the Stratosphere). Surely, ADT should not be the only parameter on which such comparative studies are based; socio-economic factors (e.g. type and age of driver, purpose and type of trip) need to be considered, as well as other factors like approach speed, the number of traffic lanes and the existence or lack of pedestrian facilities. Why not compare these three "Major intersection" category roundabouts with three signalized intersections at Town Center Drive/Covington Cross Drive, Hualapai Way/Alta Drive and Town Center Drive/Anasazi Drive (all in close proximity, all likely with ADT's of > 20,000 vpd.)?
2. Both the (Major) Town Center Drive/Hualapai Way and Town Center Drive/Banbury Cross Street roundabouts contain banana-shaped islands separating "right turning" and "through" movements in all four quadrants. These seem to have been built as an "afterthought"; I noticed remnants of the old roadway markings. As these modifications were completed after the 5-year crash evaluation period (1997-2001), (as the article mentioned the need due to the very high number of crashes within the last 2 years of the 5-year period), the report seems to be "out-of-date".
3. It would have been nice to know the inscribed radius of these roundabouts. I believe the radii in the "Major intersection" category are actually too large. I suspect that these facilities were originally designed as traffic circles, operated initially with high crash numbers, and needed to be converted. However, the inscribed circle was not reduced.
4. There are likely hundreds of intersections with "traditional" intersection controls in all three categories in this report. The report would have been more useful if it had compared the crash rates for the small number of roundabouts with City-wide averages for the large number of "traditional" intersections. That might eliminate the obvious bias pointed out in point 1 above.
5. The report claims "a few studies have shown problems with the use of roundabouts, citing that this type of intersection control increases the number of crashes". Without quoting the source of this information, this particular study in *ITE Journal* would seem to be the first of its kind. Without addressing these above concerns, this would give a wrong message to our profession, as well as to the many and growing number of agencies that are currently in the process of considering the study and use of the application of this type of intersection. Which would be sad.

Yours truly,  
Jacob de Raadt, PE  
Avondale, Arizona.





Langley Times, 2005-08-17.

become clear to me that the authors of the article didn't even dare to provide any type of "rebuttal" to my allegations, and after the Editor did not even try to justify my suggestion that these authors be put to task to do so, **I resigned from ITE, with a written protest.** At that time, there was not even a local ITE Section in Arizona, and I was not doing specific work in any "traffic" or "transportation" related functions; in fact, none of my ADOT colleagues were members.

As can be seen **at left**, opposition to roundabouts continued in a number of jurisdictions in North America for some years. (During my six years in Arizona, the ADOT Director actually prohibited the ADOT State Engineer and all his employees to even discuss them, due to political pressure.)<sup>6</sup> The one at Five Corners in Murrayville, Langley, B.C., (the subject of the letter **at left** to the Langley Times – at 48<sup>th</sup> Avenue and 216<sup>th</sup> Street) was that jurisdiction's "first one", and I sent off an e-mail to Mr. Paul Cordeiro, P.Eng., congratulating him with its design. It seems to take the traf-

fic fairly well at the time. Later on, another roundabout at 50<sup>th</sup> Avenue and 216<sup>th</sup> Street seemed simple, but I think its radius is too small and it is awkward to negotiate.<sup>7</sup> Roundabouts have now been designed and built at many places in British Columbia, and I would guess that opposition had abated.

The very first roundabout in British Columbia was built just off Highway 1 east of Chilliwack, near Popkum, at the intersection of Highway 9 and Yale Road East. I guess that ICBC's financial involvement with the MoTH (after its merger with the Ministry) was instrumental with the development of two alternatives, comparing their construction costs **plus** 20 years of maintenance costs **plus** the costs of crashes (meaning claims to ICBC). A very clear video presentation was presented to the public by a local politician, Mr. Barry Penner, MLA, as:

- (1) improving an existing intersection with a set of traffic signals, or
- (2) reconfiguring and reconstruction of the intersection around a new roundabout.

While the construction costs of alternative (1) would be in the order of only **\$ 220,000**, compared to a construction costs of **\$ 720,000** for alternative (2), the **total cost to society** over a 25-year period would be less for alternative (2), by calculating the estimated \$ 1,200,000 of less maintenance and crash (meaning claim) costs.

Working for ADOT in Arizona, I attended the Arizona Transportation Research Center's bi-annual meetings. In 2006, I had an opportunity to suggest a research project, and developed a proposal to fund such project. On the next page, I copy the text of my formal presentation to this group of about twenty people, and for which I later received an e-mail with the encouraging words "**Yours is # 1**" from Mr. Yongqi Li, PE of that section of ADOT, as the consensus of the group (by ballot), including representatives of all the major consultants. It later appeared that absolutely nobody was prepared to take the bull by the horns and do something similar in Arizona, and even the (US) Insurance Institute for Highway Safety could not be lured to pay more than lip service.

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<sup>6</sup> The exception was if a City / County would apply for a roundabout, and this actually happened in the downtown of the City of Safford, AZ, in a Project Meeting of which I was the chairman. That was in early 2007, but recent GoogleMaps imaging does not show anything new at the intersection of US 70 and 8<sup>th</sup> Avenue. The idea must have been abandoned.

<sup>7</sup> These two roundabouts are very close to where our daughter Plonia and her husband and children used to live, and the roundabout near Popkum is very close to where our son Joss and his wife and children used to live.

**Project Title: Develop a Methodology to Include Potential Traffic Safety Cost Savings when Evaluating all Highway Improvement Alternatives.**

**Problem Description:**

ADOT Roadway Predesign Section and its consulting firms are responsible for the preparation of Design Concept Reports and NEPA documents for ADOT's Infrastructure Improvement Projects. The alternative solutions investigated to improve infrastructure for existing and/or future traffic challenges are currently only evaluated based on estimated construction costs. Potential and "intangible" cost savings to society are currently not evaluated and do not become part of the financial equations that shape the decision making process. Though "safety" is not purposely overlooked, a decision (e.g. to build according to a specific recommended design alternative) is possible to cause the cheapest one in construction dollar terms to be built, which actually (in hindsight) may have caused an adverse effect on traffic safety and crash related costs. This might render it a far more expensive project to society than an alternative project that would have been incrementally more expensive to construct. The methodology is evidenced by information in the FHWA's course "New Approaches to Highway Safety Analysis".

**Literature Search Summary:**

A literature search will indicate what other jurisdictions worldwide are doing, and how and to what extent an approach that incorporates "total cost to society" has already been used. An example of the methodology is shown in the Supplemental Information attached.

**Research Objectives:**

The objective of the Study is to develop a Methodology that can be used by ADOT Roadway Predesign Section to instill an higher level of awareness in developing project alternatives that include basic Safety Analysis methods and how these can be included in the decision making process.

**Affected Groups:**

ADOT's Roadway Predesign Section, Traffic Design Section, HES Section, Regional Traffic Sections, Districts and all other internal and external sections that are involved in Project Teams, even FHWA, other Federal Agencies and the Insurance Institute for Highway Safety.

**Anticipated Benefits:**

A usable approach that includes more safety will inevitably result in a better evaluation process for alternatives, which in turn will lead to better decisions and eventually to improved traffic safety.

**Expected Implementation:**

The result of this research project may result in a policy document that will establish how alternatives and costs estimates can be better evaluated. Implementation should not be difficult.

**Project Champion (required):** Jacob de Raadt, PE, MBA.

**Project Sponsor (required):** Vince Li, Manager, Roadway Predesign Section.

**Proposed Technical Advisory Committee:**

Reed Henry, PE (Traffic Safety HES)	Governor's Office of Traffic Safety
FHWA Arizona Division	Transportation Planning Division
Arizona Transportation Research Center	Department of Public Safety
Somebody from the vehicle insurance industry or IIHS	Yongqi Li, ATRC

**ATRC Budget: \$ 15,000**

**Other Budget: \$ 0 (identify the source of funds)**

**Estimated Completion Date: 1 year after initiation**

**Supplemental information:**

One example of a project where the methodology was used to include "intangible" cost savings to society in evaluating alternatives, is a roundabout intersection that was proposed and built just east of Chilliwack, British Columbia, Canada, by the BC Ministry of Transportation. It was likely first suggested by ICBC (the Insurance Corporation of British Columbia) which is an integral part of the Ministry. (Compulsory third-party liability insurance for all vehicle owners in British Columbia is only available through this Crown Corporation. It is a benevolent monopoly.)

The costs to install signals at an existing rural highway intersection (Highway 9 and Yale Road East) was estimated at

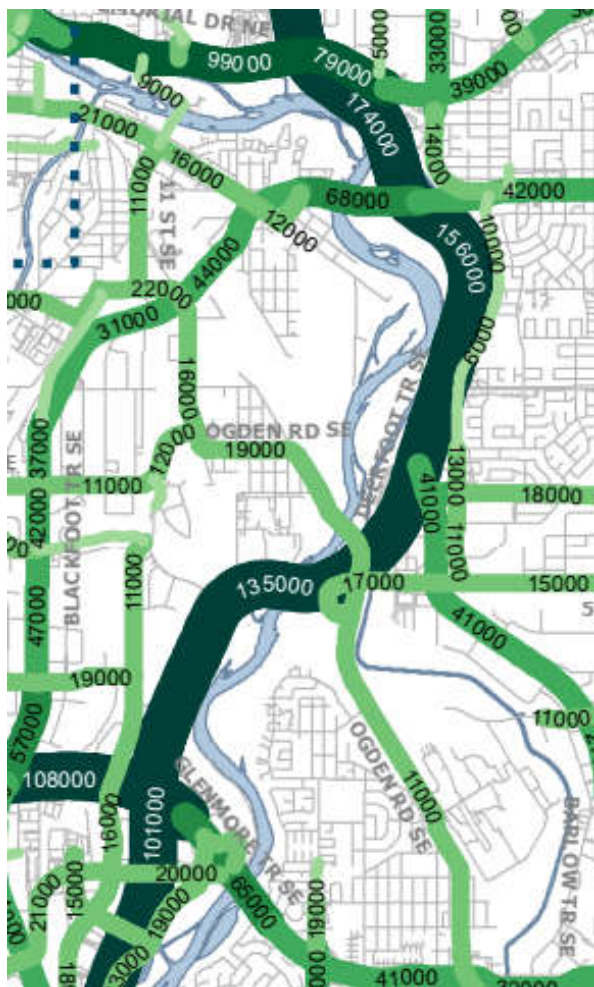
\$220,000. The costs to construct a roundabout at this location was estimated as \$720,000. The benefit from fewer crashes and reduced maintenance over 25 years was calculated as \$1.2 million.

It was decided (and it seems to have been an easy decision) to build a roundabout, and it was completed in October 2005. It is understood that it functions well.

For information, see <http://www.barrypenner.com> and click on "Traffic Roundabout on Highway 9." A media release is also available at [http://www.barrypenner.com/view\\_page.php?id=246](http://www.barrypenner.com/view_page.php?id=246) and much more at the web-site of ICBC at [http://www.icbc.com/road\\_safety/roadsafety\\_support\\_improve.asp](http://www.icbc.com/road_safety/roadsafety_support_improve.asp).

It is understood that this concept is now almost generally accepted in British Columbia. It is not known if it is used in other jurisdictions. The third bullet near the bottom at the web-page of the Insurance Institute for Highway Safety or IIHS (<http://www.iihs.org/about.html>) seems to indicate their interest.

Examples abound of situations where this methodology was not used. I have personally commented on various Initial Project Assessments, and have seen various Design Concept Reports, where alternatives solutions were presented and the one with the cheapest costs in construction dollars was recommended. I believe that by using "total cost to society", an alternative with a slightly more expensive construction cost but a much larger potential of saving future accident costs, might have been recommended. This research may be the beginning of a new mindset.



The words in **this ▲ paragraph** summarize a part of my work in the Roadway Predesign Section with ADOT, and how I worked as a civil servant in a bureaucracy with a lot of red tape. The above opposition stemmed from a poor design of a roundabout, somewhere off I-17 north of Phoenix, where a major business and its personnel seemed to have a lot of clout, going public (viral, we would say today) with the words “No more of these!” I was not involved with that project, but pitied the Project Manager(s) who had to deal with the novel concept that the public seemingly wanted to ban or rip out by designing band aids. The confrontation between the Director and the State Engineer erupted after a reputable consulting engineering firm had suggested to install some “dogbone” roundabouts at several proposed interchanges on the South Mountain section of SR 202. But that’s just about the last word I will write on roundabouts in this book about my work in Calgary, where they did not exist at all in the early 1980’s. We only had traffic circles in Alberta, like the one on Highway 1 at the entrance to Banff, and the one at Groat Road in Edmonton. While I was in Arizona, many jurisdictions did their best to promote roundabouts and their safe use. Police Departments and State Agencies made videos, quoting that the Federal Highway Administration had just published a book about their design procedures. Doug Smith at ADOT became the in-house designer of a roundabout west of Ganado on the Navaho Indian Reservation, which was nor round but oval.

The design history (currently still on-going as a saga) of Deerfoot Trail is very interesting and actually **quite sad**, though not unique in North America. I note that for the past decade, while traffic volumes have greatly exceeded the design volumes estimated for 1996, the City of Calgary and Alberta Transportation (under its present name) have already spent many megabucks to try to come up with an idea to redesign it, this time with much more public consultation than fifty years ago.

<sup>8</sup> 2015 AADT weekday volumes on a section of Deerfoot Trail, from a document by the City of Calgary.

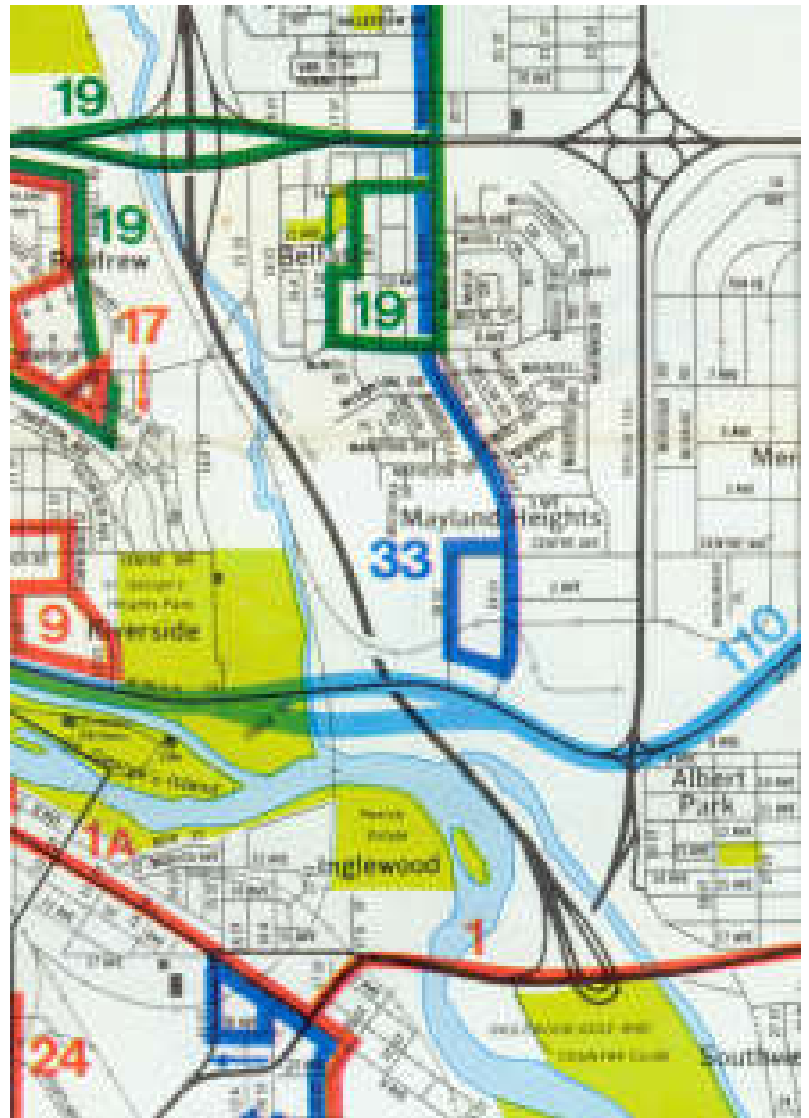
During our first visit in May 1975, we had obtained two City maps:

- (1) An undated one from the Calgary Tourist & Convention Association, (at left below) and
- (2) A Calgary Transit Bus Map, dated 2/75 in its very top right hand corner (at right below).

From the excerpts of these maps, the following details are to be noted:



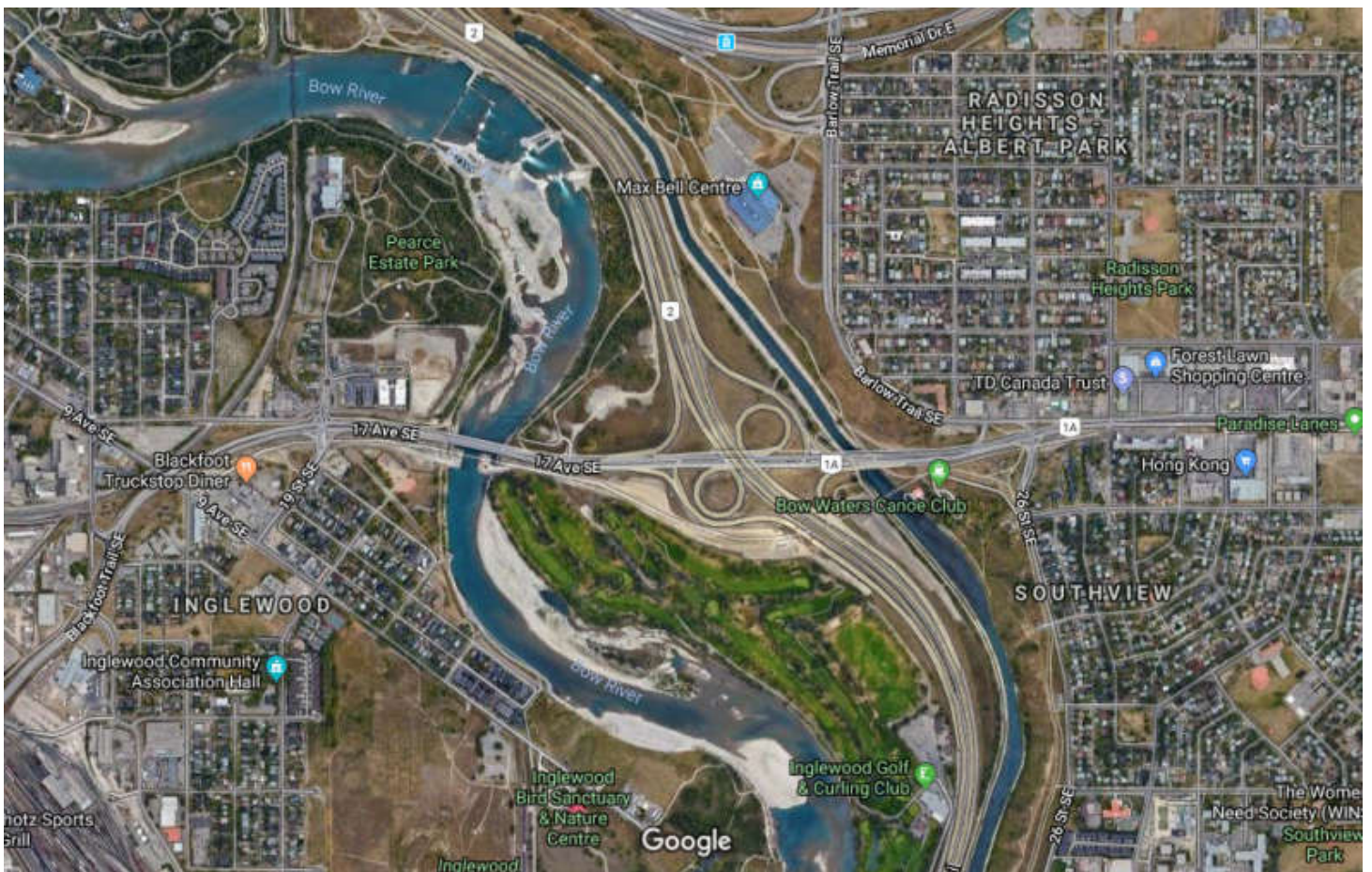
(1)



(2)

- From Map (1), the assumption could be made that “No. 2 Hwy North to Edmonton” that ended at 16 Avenue NE might perhaps be extended and zig-zag east to Barlow Trail, then south to 17 Avenue SE (with a trumpet interchange) and then west and south to Blackfoot Trail and its full cloverleaf interchange at Glenmore Trail, then west again to the single point interchange at Mcleod Trail that was shown as “No. 2 Highway South to U.S.A.”(on part of the Map not shown on the excerpt).
- From Map (2), it is clear that the “trumpet interchange” at 17 Avenue SE was not built. I cannot remember seeing the funny return lanes (like a cul-de-sac) of Deerfoot Trail, south of 17 Avenue SE. The map shows a Barlow Trail stub south of Memorial Drive that may have been built before the concept shown in Map (1) was abandoned.

That’s what sometimes occurs when “politics” gets in the way of “common sense transportation ideas”.



This GoogleMaps image shows the very north end of the Deerfoot Trail Freeway Project of 1977/79.

The north limit of the **Deerfoot Trail extension project of 1977/78** was about halfway two existing interchanges – a **full** interchange at Memorial Drive SE and a **half** interchange at 17 Avenue SE – and the latter was Highway 1A, Alberta Transportation’s responsibility. Deerfoot Trail had been designated the “new” Highway 2, replacing Blackfoot Trail. I guess these two interchanges had been built after the NE section of Deerfoot Trail, designed by Stanley Associates, the firm where Rien Scheffer worked when I met him in 1975 at the old Edmonton Airport. I remember him saying that he had worked on the design. The 16 Avenue NE interchange was based on the concept of four traffic signals around the actual “intersection point” between the freeway and the intersection roads; the other interchanges were a mish-mash. For 17 Avenue SE, the overpass had likely been built as a part (namely the south leg) of a future interchange with such configuration, with two ramps. But by 1977, fairly recent accident records at the recently completed freeway sections, (particularly at 16 Avenue NE the Trans-Canada Highway, Highway 1), had already resulted in a **change of thinking** at Alberta Transportation in Edmonton: New interchanges on Deerfoot Trail would not have these dangerous traffic signals, but rather loops, ramps and collector-distributor roads.<sup>9</sup> This was obviously **not quite possible / affordable** at 17 Avenue SE. **Why?** Several severe constraints existed in this area. **(a)** The 17 Avenue SE interchange could only be reconfigured so that it would still have two traffic signals, **(b)** The access to Inglewood Golf Course

<sup>9</sup> The AASHTO Guidelines strongly recommend using the same concept throughout a highway jurisdiction. During the early 1990’s, BC had a problem with the improvements at the Lonsdale (diamond) Interchange in North Vancouver. BC drivers were not used to these, they only knew how to operate through ramps and loops. This came out clearly in a Report by Hamilton Associates, (as funded by ICBC), during the April 1997 ITE (Quad) Convention at Vancouver. (See below.)

would need to be abandoned;<sup>10</sup> (c) The existing **Cushing Bridge** would be the west project limit<sup>11</sup>; (d) Deerfoot Trail would bisect the strip of land between the Bow River and the Western Irrigation District (WID) canal; (e) Ramps and loops for this interchange modification would severely impact the area available for this City-owned Golf Course, and also its financial viability; and (f) The City would need to commit itself to rebuild Inglewood Golf Course on the remaining narrow strip of land, including (g) a brand new on-site access road (from the south) and an overpass over Deerfoot Trail at 34 Avenue SE, accessing from what was still called “Barlow Trail SE” at that time, but is currently called 26 Street SE in Dover Glen.

At the 17 Avenue SE Interchange, the existing structure needed widening to allow for a set of EB-NB and WB-SB turning slots. The former was a detail design challenge, because the new final elevations (with crossfall within certain limits and transitions) had to match the existing concrete curb and barrier. ACRES was RCPL’s sub-consultant, and the widening of this bridge was part of Contract 7a. Another minor bridge widening was 17 Avenue SE over the WID canal. South of 17 Avenue SE, I designed a 750mmØ east-west watermain relocation starting at Cushing Bridge, around the ramp and loop in the SW quadrant, crossing Deerfoot Trail and the WID canal, to an existing City pump station on its east shore, to serve Southview, Forest Lawn and lands beyond, which was a major growth area of the City at that time. This was a steel pipe with cement mortar lining, the first time I encountered that type of material – with custom designed bends and the like. A New Jersey type half-barrier was needed around this pump station, and this was also approved by City staff.

The design speed of all the ramps and loops in Contracts 7a (and 7b) was 50 km/h. In April 1997, I attended the 1997 Joint Conference of the Pacific Northwest ITE Quad Section and the Western Canada Traffic Association in Vancouver BC, where Mr. Troy McLeod EIT, Dr. John Morrall and Mr. Bill Bruce P.Eng. had a “Presentation 4A2”, titled **Ramp Advisory Speed Information for Truck Drivers**. Bill (who spoke) reported that over the “more recent years”, some speed related heavy vehicle turnover crashes had occurred, and that the City had developed a specific advisory sign – to limit and even avoid this kind of mishap. Some of these danger spots were on Deerfoot Trail, particularly the **NE quadrant loop at 17 Avenue SE**. After the presentation, I addressed the speaker by stating that I would like to congratulate him with his words, that I was sympathetic with his case, and that I had some additional background to the City’s dilemma. I confessed that (1) I had been with RCPL in 1978 and knew that these loops had met the “standards” at the time, but also that (2) I had personally been “worried” about them since my membership (as Yukon representative) on the RTAC “Heavy Vehicles Weights and Dimension Committee” (as well as its Implementation Planning Sub-Committee) in the mid-1980’s. That particular RTAC study had recommended the implementation of revised allowable vehicle weights and dimensions, standardizing them for all of Canada in what became the **1987 Fredericton Accord**, but at one of our latter committee meetings the question had arisen: “What are we (= the Provinces and Territories) going to do with the existing infrastructure?” That important question had not actually been answered, and these Calgary truck turnovers were a sad consequence. The City of Calgary’s experience had already lead to the development of an “**advisory sign**” that warned truckers of the possibility of overturning on these sharp curves, with a **30 km/h** advisory speed. This became a common road sign in Canada and the USA, and is shown in the Manual of Uniform Traffic Control Devices (MUTCD). Slowing down is always an option.

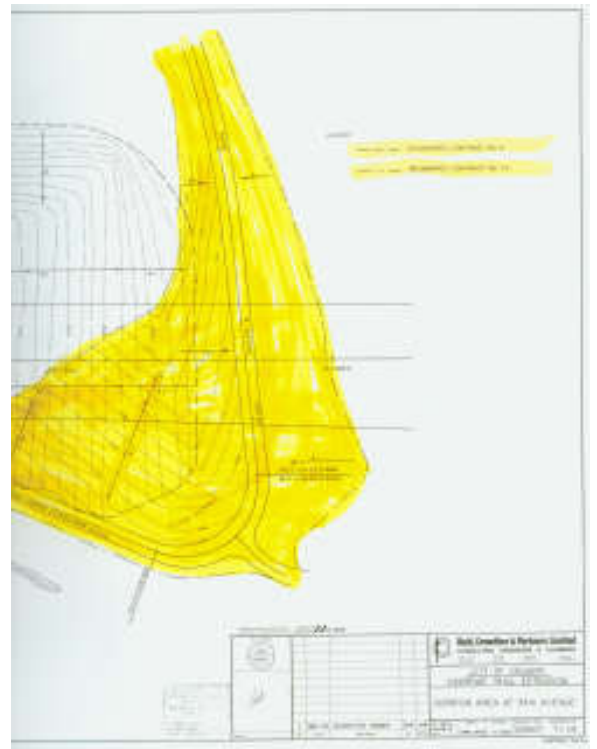
In retrospect (2019) I find it strange that the presentation did not distinguish (a) between a “ramp” and a “loop”, (b) between acceleration and deceleration conditions, (c) between downhill and uphill grades, and (d) between “posted speed” and “design speed”. I have always believed that a deceleration ramp (or loop) should preferably be uphill to be safe, and that an acceleration ramp (or loop) should preferably be downhill to be safe. There are some other statements in that 22-year old presentation that seem to raise my eyebrows... (in 2020!)

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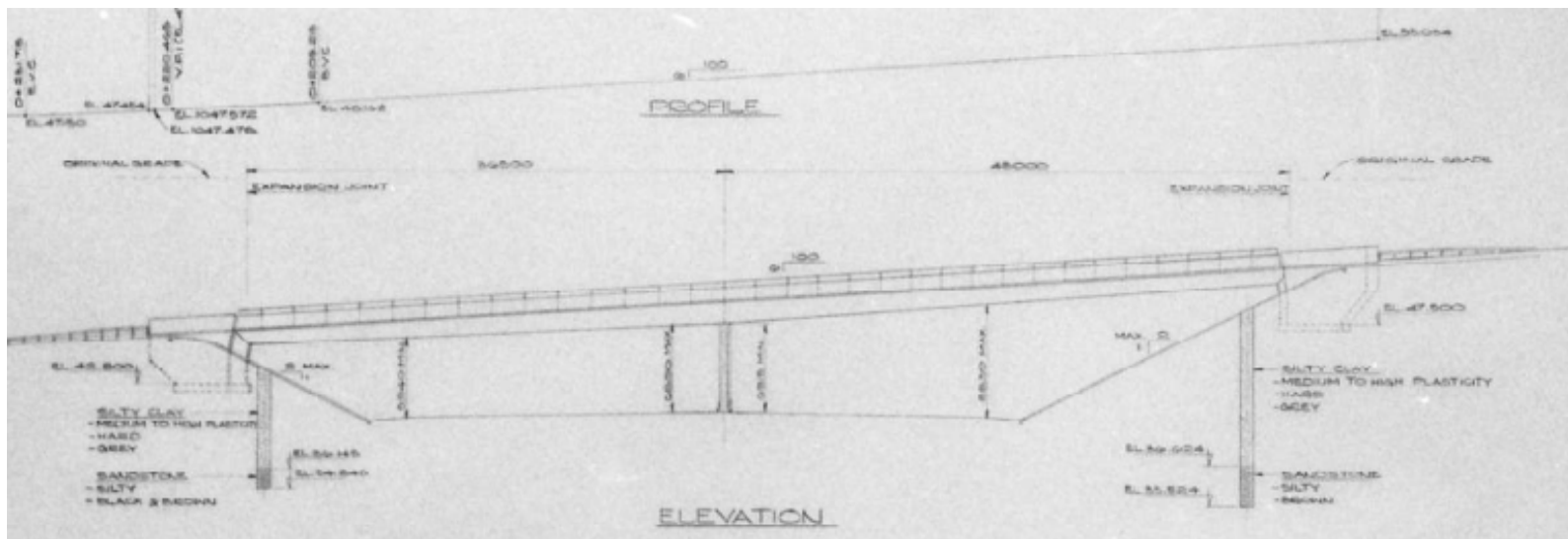
<sup>10</sup> Inglewood Auto & Trailer Court, accessing 17 Avenue SE opposite the golf course, was also to be abandoned.

<sup>11</sup> Cushing Bridge connected to Blackfoot Trail SE, which was an earlier (or initial?) “freeway” project that somehow abruptly ended at Southland Drive SE.

South of Inglewood Golf Course, Deerfoot Trail crossed the WID canal that runs to Chestermere Lake – with a very skew concrete bridge, and then entered into a substantial (meaning deep and long) excavation. This 34 Avenue SE overpass structure was designed by Kirkor Martin Hampshire & Associates Ltd, with Tom Martin, (then P.Eng.) MICE, MStruct.E., a former RCPL employee (until early 1976) and also a South African immigrant, as the responsible professional. At RCPL he had designed the 5 Street SW CPR underpass, which was being built in 1978/9, and he went on designing a number of very innovative bridges in Alberta through the years. Shown **below** is the bridge profile (as seen from the south), with a road grade of **6.0%**. This two-span structure was designed with its abutments **within the existing banks**, and the median pier **within a small deep hole**. The deck spans could then be built on formwork in a very shallow excavated trench. After stripping the sides of the decks, all material could then be excavated without interfering with traffic on top. This design must have saved the City quite a bundle; in April 1978, drawing T1-14 (see right) had already been prepared, assuming the excavation of a huge hole for the abutments and a median pier, as part of Contract 7a. (Des. & Dwn. M.S., “Issued for Tender” May ’78, by CDK, Approved IJW.) Of course, this work was deleted when Tom Martin brought in his “innovative” drawings! A section of 34 Avenue SE, the access road to the golf course (with a skew WID canal bridge), reconfiguration of the golf course itself and a gravel access road to Home Oil were also part of Contract 7a.<sup>12</sup>

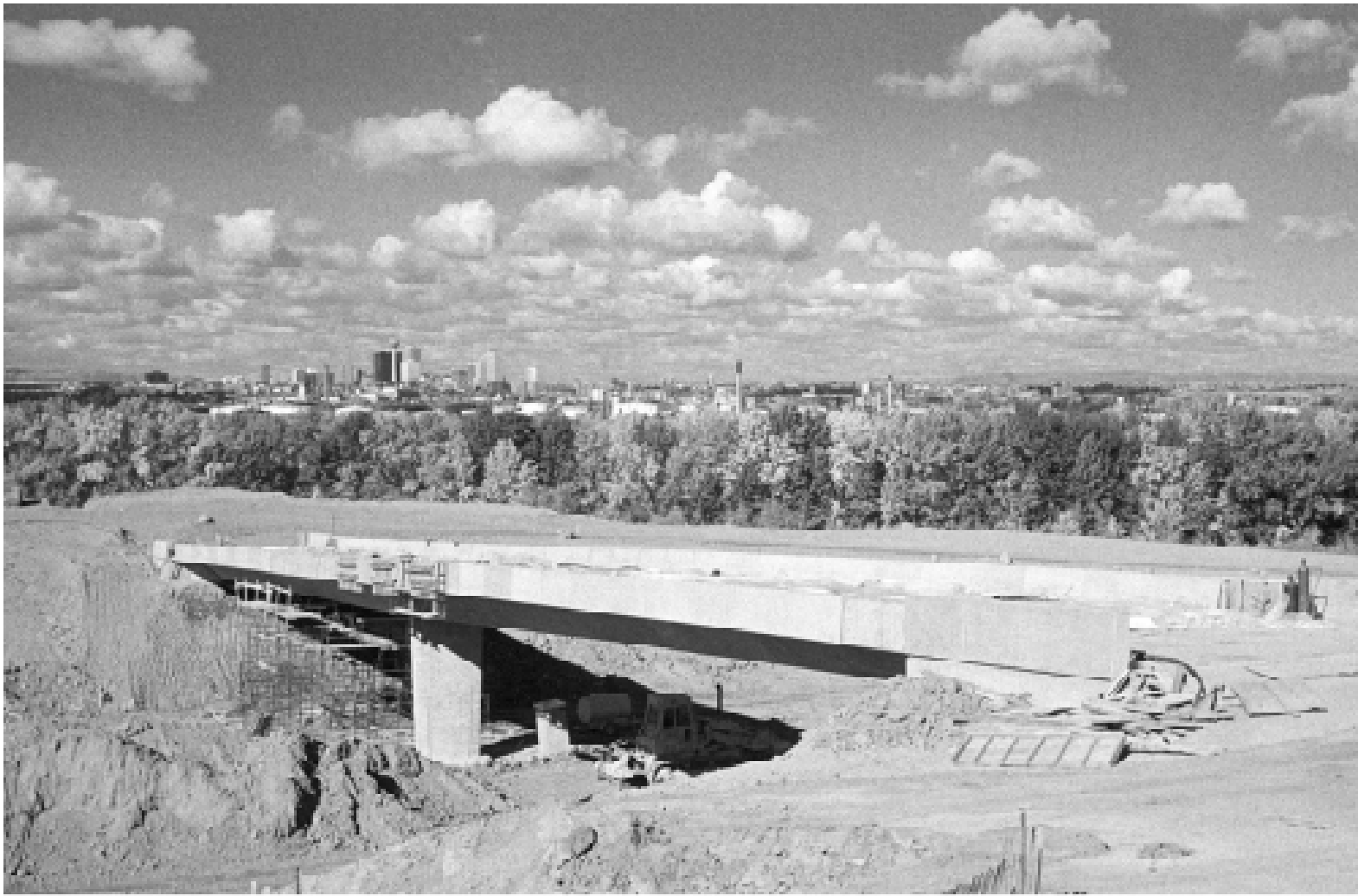


Original excavation proposal at 34 Avenue SE overpass (yellow work later eliminated).



Profile of Golf Course Access Road bridge over Deerfoot Trail, leading to 34 Avenue SE, copied with the kind permission of Mr. Tom Martin, see also **next page**, as well as some of his reminiscences in the text.

<sup>12</sup> The south half of the golf course may well have been developed later. In 2019. Home Oil is no more, and there are bicycle trails in the area. See the GoogleMaps image below. The City really bent over backwards to enable this “older” golf course to remain. We sometimes joked that this would be a good golf course for deaf people, considering an expected heavy traffic noise. The landscaping architect could do nothing about that!



Thirty-fourth Avenue S.E. crossing Deerfoot Trail, Calgary, 1979

This was the first bridge in Calgary the design for which I was solely responsible. Brad Crowther and Partners, Consulting Engineers, were responsible for the Deerfoot Trail south development and they invited me to design this one bridge which was one of many associated with the project. Pradeep Aul, then City of Calgary Bridge Engineer, stated, on seeing my design proposal, that "This is architecture - not engineering!" a comment that perhaps reflected rather poorly on structural engineering design in Alberta at that time. The design was so well detailed both in the specifications and in the drawings that no changes had to be made during the construction of the bridge.

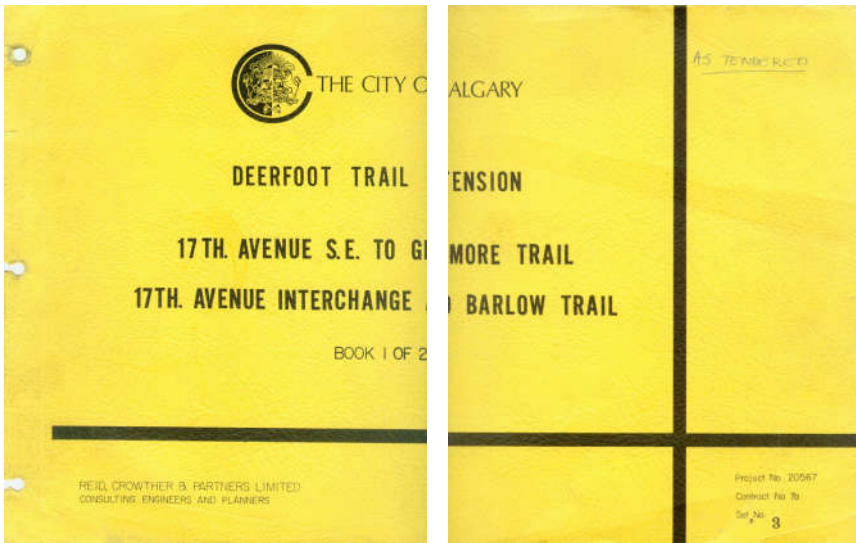
There was a Landscaping Architect for the project, as well as a Golf Course designer. We had to interpret what they really wanted to have done, as there were at first some serious misunderstandings between these professionals' drafting standards and those of civil engineering. These were all resolved eventually (but see below!) by issuing an Addendum. The embankment material for the golf course and the segment of Deerfoot Trail on the west (opposite) side of the Bow River was to come out of the massive excavation area, up to 34 Avenue SE under Contract 7a, and the rest under Contract 7b. As a result, one of the two Bow River bridges and the CNR/WID/Ogden Road/CPR overpass (see below) had to be completed "a.s.a.p.," so that loaded earthmoving equipment could cross it loaded, and return empty. These bridges were in fact designed for these extra heavy loads. For the further part of the south half of the project, including the Glenmore Trail interchange and the Heritage Drive SE overpass, embankment material was to be dug and hauled from "Motorcycle Hill", a borrow pit adjacent to Blackfoot Trail SE. During December 1978, due to timing restraints on Contract 7b, the Contractor proposed to add "road salt"<sup>13</sup> to the material for the embankment for the Heritage Drive SE overpass, so that it would not arrive frozen on arrival or prior to compaction. But then we had a very sudden long Chinook, and the idea was shelved!

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<sup>13</sup> Calcium chloride, which is commonly used in Canada as a dust abatement agent for gravel roads.



The City had purchased most of the private properties for the project area, including some old houses. In the summer of 1978, one undemolished house was temporarily used as Construction Office for Contract 7a, until it also needed to be removed. I designed some gravel roads north of 50 Avenue SE east of Barlow Trail SE and to the City Yard south of 50 Avenue SE. These had been overlooked with the tender; it had been a rush job. For a proposed residential subdivision off Barlow Trail SE, the east highway right-of-way limit had to be “struck” to allow these lots backing onto Deerfoot Trail with “sloping rights”, meaning that backyards of these lots would slope toward the freeway and be somehow “useless” as a backyard, with an easement. A proposed power pole alignment also had to be developed, to the satisfaction of the Calgary Electric System. The street in that development became known as Dover Glen Crescent.

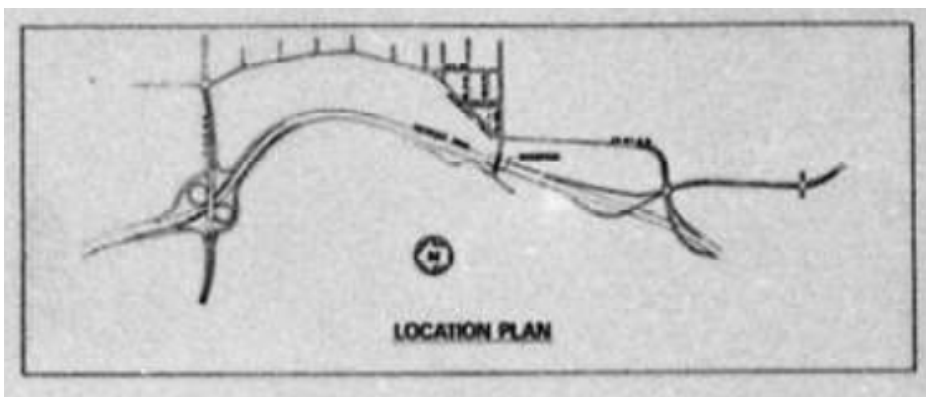


◀ This is the cover of the “As Tendered” version of **Contract 7a**. It only included earthworks near 17 Avenue SE and near the intersection with Barlow Trail SE, allowing for two overpasses; bridge widening at 17 Avenue SE, golf course access road construction (plus some gravel local roads that I designed for an “**Addendum #2**”, as well as installation of stormsewers with manholes but without actual catchbasins.<sup>14</sup> Contract 4 that followed shortly afterwards was for landscaping for the Inglewood Golf Course and the 17 Avenue SE interchange loops.

(◀My scanner cannot handle a large sheet!)

In 1978, the “stub” for a future **Peigan Trail SE freeway EB**, (not unlike the Deerfoot Trail freeway) had already been conceived / designed with two grade separations (both overpasses) crossing Deerfoot Trail:

- (a) The SB Deerfoot Trail to Peigan Trail EB off-ramp crossed on a bridge to join “Peigan Trail” at a traffic signalized intersection with Barlow Trail SE.
- (b) The WB Peigan Trail to SB Deerfoot Trail bridge had **two traffic lanes, tapering to one lane** where it became a SB on-ramp, joining Deerfoot Trail at the east end of the **next major structure**, crossing – from east to west – (1) a single CNR track, (2) the WID canal (i.e. for the second time), and then (3) three CPR tracks and (4) Ogden Road.

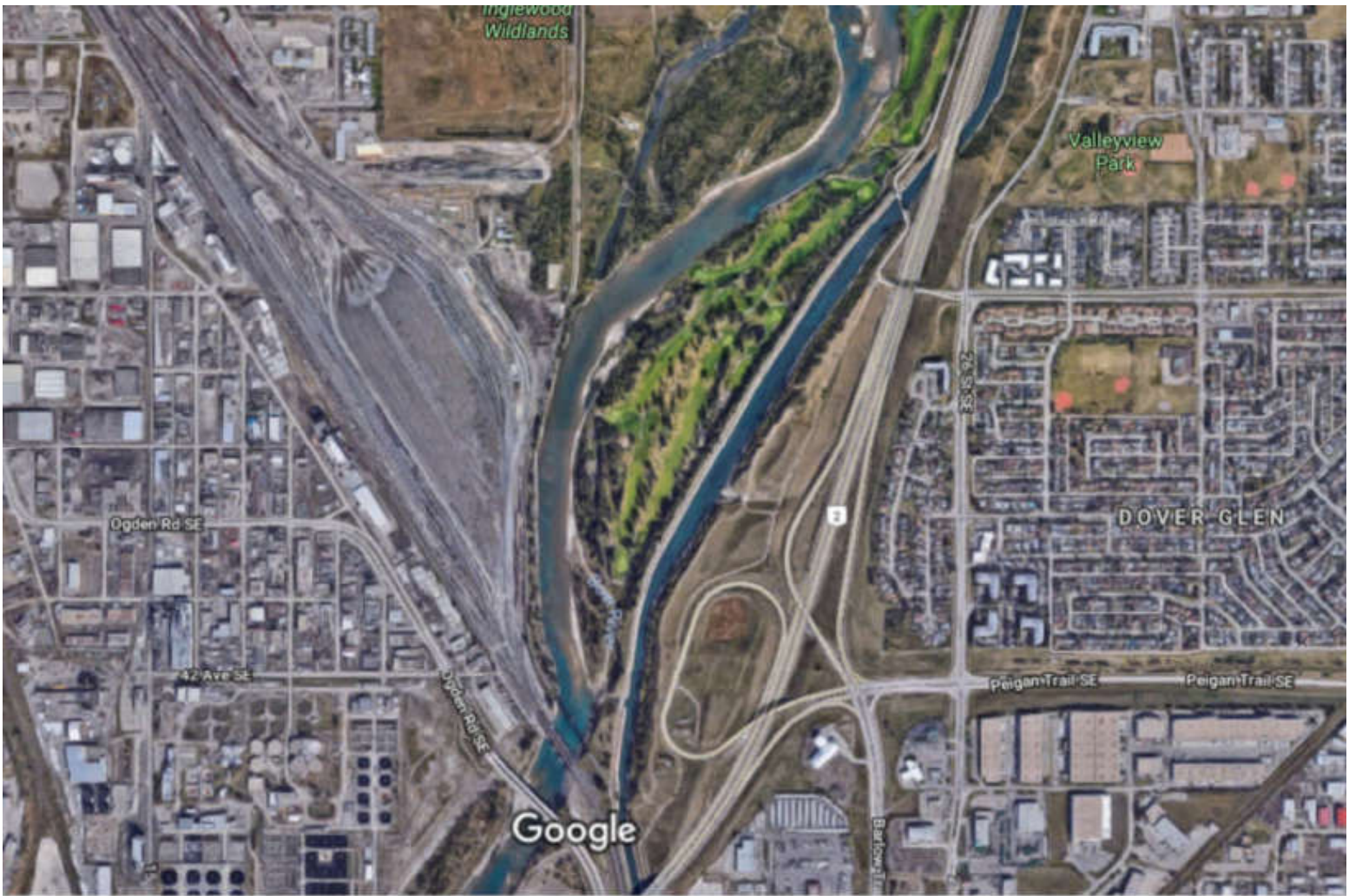


◀ 1978 Location Plan of Deerfoot Trail from 17 Avenue SE to the Peigan Trail ramps. 34 Avenue SE Overpass is in the middle.<sup>15</sup> Note how much the 1978 layout differs from the current Google imaging (**next page**). Both bridges built over Deerfoot Trail in 1978/79 for an unpursued freeway to the east (=Peigan Trail) are still used, but the southern overpass now shows another feature,

**.....a NEW huge oval shaped loop and SB on-ramp.**

<sup>14</sup> Catchbasins were to be installed later, with the concrete pavement and the median and other concrete barriers.

<sup>15</sup> With thanks to Mr. Tom Martin (since 2018 back in Calgary) for these two excerpts from his project drawings!



This GoogleMaps image shows the top middle end of the Deerfoot Trail Freeway Project of 1977/79.

This future Peigan Trail Freeway had originally been called the “**50<sup>th</sup> Avenue Freeway**”, but by 1977, the name had changed, perhaps in a belated effort to name highways after people, including (North American) Indians, in the city of the “Greatest Show on Earth”, a.k.a. the Calgary Stampede. Mr. Mel Hirt, P.Eng., Traffic Engineer of the City of Winnipeg, once visited an ITE Section meeting (when lobbying for our votes as candidate for President of the Canadian District, succeeding Al Swanson) and said that in his view, Calgary was quite progressive: “**You build all kinds of freeways here, and you call them trails**”, he said.

The NB Deerfoot Trail on-ramp from the signalized intersection with Barlow Trail SE) is also **NEW and much longer** than the one built in 1978, which was actually removed in its entirety. To my perception, the distance between these two signalized intersections on Peigan Trail seems to be “very short”, which could perhaps create another challenging situation in the future.

The **left photo on the next page** shows the SB Deerfoot Trail off-ramp to EB Peigan Trail, and its structure at right, with SB Deerfoot Trail traffic traveling below the bridge, and the berm at the extreme right. The **right photo on the next page** shows this same berm at left, the (former) WB Peigan Trail to the SB Deerfoot Trail on-ramp west of the overpass structure. These two very skew structures were already being designed by Speco Engineering Services, the consulting firm owned by Dr. Gamil Tadros, P.Eng. I sometimes overheard discussions about the design, over the partitions in the “open space concept” of the office.



Deerfoot Trail SB off-ramp to Peigan Trail, approaching an overpass; looking southeast; this ramp remains in use.



Former Deerfoot Trail SB on-ramp (which has been replaced by a much longer loop), looking northeast.<sup>16</sup>

**But ...** the 1978 design drawings to build a WB Peigan Trail to SB Deerfoot Trail **on-ramp** had a supposedly **insufficient spiral length**, right at the very end of the SB on-ramp, where the long multi-purpose bridge started. However, this design feature **had been approved by way of the City of Calgary’s phone call** (or Alberta Transportation’s?) to RCPL **in September 1977**, a few months before I arrived in Canada for the detail design. **How do I know that?** Please “fast forward” with me for 27 years:

On 2005-05-16, while working for ADOT in Phoenix Arizona, I received a phone call at work from Mr. Karl Bomhof, a Calgary lawyer with the law firm Lawson Lundell, about a “Disclosure” on Friday 2005-06-03. (His brother was the Water & Sewerage Engineer of the City of Abbotsford, B.C., for whom I – meaning Grassroots Consulting Services – had designed a watermain for the Marshall Road Railway Crossing Project in 1994/5.) I was asked to fly to Alberta to explain some things about Deerfoot Trail, and we discussed who were the people involved in the design of the project in early 1978. The issue was a charge of **“inappropriate design”** that a paraplegic man had made against all parties in the project from 1975-1980. In early January 2003, this person had driven the **second** vehicle of a four-vehicle crash<sup>17</sup> on Deerfoot Trail SB at this particular on-ramp, during poor weather, fog<sup>18</sup> and ice at 6:57 a.m. during the early morning rush hour. He, together with “Her Majesty the Queen in right of Alberta” then wanted the full pound of flesh (\$ 8 million) from all parties involved with the highway and bridge design, i.e. **“Jeremy Jackson, Lukas Jackson, Charlene Sparks, Mekonen Lakew, Her Majesty the Queen in right of Alberta as represented by The Minister for Transportation, and the Minister of Infrastructure, the City of Calgary, Toyota Motor Corporation, Toyota Canada Inc., Earth Tech (Canada) Inc., formerly known as Reid Crowther & Partners Ltd., and XYZ Engineering and Design Corporation, Defendants.”** My initials, as “JDR”, were shown in the box “CKD” (meaning “checked”) on all the roadway design drawings, which had been obtained from the many microfiches at the City, and it was needed to determine **“who had done what”**. Mr. Bomhof’s assistant sent me a hotel booking and two plane tickets for a direct flight by America West Airlines with a Canadair Regional Jet. Lydia joined me at that

<sup>16</sup> These two photos were taken at different occasions, **during the 1990’s**, when visiting our (studying) son Theo. On the photo at right, note the huge berm at left – which will be the topic of a few pages down.

<sup>17</sup> First vehicle: GMC pick-up truck; second vehicle: Toyota MR2; third vehicle: Pontiac GrandAm; fourth vehicle: Mazda 626. Vehicles 1 and 2 had come **from the east by the on-ramp**; vehicles 3 and 4 had come **from the north**.

<sup>18</sup> Fog from the Bonnybrook Sewage Treatment Plant was already known as a traffic hazard problem soon after the official opening of Deerfoot Trail. This plant had just been enlarged, with RCPL as the main consulting engineers!



first trip (at our costs, of course), and we planned to visit Theo and some friends in Calgary. We lodged in the Westin Hotel for two nights, flying north on Thursday morning and flying back south on Saturday morning. On arrival, in the downtown, Lydia and I went to Devonian Gardens and TD Square, where we bought a new jacket for me. (Appearance counts!) Late that Thursday afternoon, Theo drove me to the site of the unfortunate event of January 2003, which I had not seen for about a decade. Traffic flow that day (in rainy weather) was very heavy, and he said it was like that every day. He normally avoided it, he said, other routes were faster.

During the first meeting in Calgary on 2005-06-03 at 9.00 a.m., I got re-acquainted with Clarence Katzenberger<sup>19</sup> and Ed Tahmazian, who had come from Vancouver for the same purpose, after many years. In Mr. Bomhof's downtown high rise office, I understood that three months earlier, on 2005-04-06, Ed Tahmazian had already provided "Undertakings" about the situation, prompting the search for me in Arizona, namely his "Undertakings 1 – 5."

**Undertaking no. 1** – Find a list of all the people that assisted Mr. Tahmazian on the original Deerfoot Trail design project who are currently alive;

**Undertaking no. 2** – In addition to Undertaking no. 1, provide the names of the design engineers of the road;

**Undertaking no. 3** – Review records and determine if the Stanley Report<sup>20</sup> can be located and produce same;

**Undertaking no. 4** – With respect to the City's document 29.11, make inquiries and determine who "JDR" was at Reid Crowther;

**Undertaking no. 5** – Search Reid Crowther's records to determine whether the actual stamped as-built drawings can be located;

**Undertaking no. 6** – Advise whether or not the Peigan Trail on-ramp, when it was designed in 1976 by Reid Crowther, was designed in conformance of all of the relevant TAC Guidelines relative to on-ramps (under advisement);

**Undertaking no. 7** – Try to find the actual as-built drawings from Earth Tech<sup>21</sup> for the on-ramp and produce same;

**Undertaking no. 8** – Advise as to what specifications were use when designing the on-ramp, including radius of the on-ramp, the lanes, the signage, the length of the taper, the speed on the radius of the curve, those sorts of things (under advisement);

**Undertaking no. 9** – Review records and locate the handouts that are referred to in 3-9, Minutes of Meeting Number 23, specifically as they relate to Item Number 2, 3 and 5;

*[[and at the bottom (as if the lawyers were elementary school teachers):]]*

**Undertaking no. 12** – Look through files again and advise if there are any either sketches or functional design drawings that relate to the two proposals; one, lengthening the ramp; or two, construction a modified loop.

Now what ought my professional response to be, except to responsibly cooperate in this, without misgivings?

<sup>19</sup> Clarence Katzenberger (a long term RCPL employee) had been transferred from Calgary to Vancouver during the lean days in Alberta. I met him once in the Lower Mainland during the 1990's, but in 2005, he had a business card with him of a firm called Trans Tech Engineering in Calgary. Ed was still in Vancouver, I was lead to believe.

<sup>20</sup> I never saw or heard anybody ever mentioning a "Stanley Report" for this section of Deerfoot Trail.

<sup>21</sup> The Deerfoot Trail project was completed long before RCPL was purchased by Earth Tech.

Having prepared myself at home for two weeks, I brought and presented a Staff List of RCPL dated July 16/79. Both Ed and Clarence were **utterly amazed** that I had kept it for all these years; as this proved that many people had been involved in the Deerfoot Trail project. This was my contribution that day, satisfying Ed's "Undertaking 1". From this list, he explained to Mr. Bomhof the roles of all the individuals who had worked on the Deerfoot Trail design team. All the names were there, excepting those who had already left the firm by July 1979: Richard James, Ian Williams, Ian Norris and Janet Parker.<sup>22</sup> My handwritten notes show that we agreed to

REID, CROWTHER & PARTNERS LTD.		JULY 16/79	
AKHAKARI, Brigitte	269	FOESSEL, Dieter (D.G.)	231
AITKEN, Bob (R.C.)	280	FU, Patrick	230
ANDERSON, Bob (R.C.)	260	GAHUNIA, Anwar (A.S.)	243
ATKINSON, John (J.M.)	324	GAUTHIER, Ginette (G.S.)	292
BAJGAR, Raouf	228	GENOUDRET, Elaine (E.D.)	388
BARBE, Denise	329	GENHILL, Dave (D.A.)	240
BARBATO, Kyrin (E.E.)	245	HARDERT, Shirley (S.G.)	330
BERNARD, Doug (D.W.)	323	HARDROT, Hildegard	328
BISHAMBER, Barry (S.B.)	288	HASS, Krystyna	327
BHAT, Suresh (S.A.)	263	HASS, Ted (T.W.)	271
BLAIS, Larry	243	HEBERTON, Leslie (FISH CR.)	284
BOYARCHUK, Ed (FISH CR.)	224	HENRICHES, Ian (L.M.)	284
BRADSHAW, John (J.C.)	251	HOGGE, Paulette (P.A.M.)	238
BROCK, Miles (R.M.)	247	MORVATH, Bert (B.J.)	245
BURT, Sherman	261	MUI, Peter (P.M.W.)	235
BYERS, John (J.C.)	334	MUD, Eric	250
CAHNS, Peter	238	JAMES, Lillian (L.H.)	271
CARLETON, Larry (L.J.)	289	JENKIN, Peter (P.E.)	259
CARRASCO, Milton	269	JENNINGS, Melinda	280
CHAM, Theodora (T.T.)	337	JUDD, Jacquline	266
CLATTER, Rhonda (R.C.)	210	KAN, Prosper	248
CLARKE, Brian (B.B.)	278	KATZENBERGER, Clarence (C.D.)	254
COX, Susan (S.A.)	328	KEEMAN, Bob (R.M.)	340
CROWIN, Kevin (K.A.)	258	KEMP, Al (A.R.)	212
CROWTHER, Ed (E.J.)	219	KHARJAN, Jim (J.R.)	227
CULSHAM, Jim (J.R.)	335	KINDERMATER, Gary (G.C.)	315
CULSHAM, Lesanne	329	KIDNEY, Steve (S.G.)	266
DAVIES, Keith	227	KLEINHOUT, Gerry	231
DAVIS, Jeff	319	KREFT, Tina	261
DEADLE, Dennis (D.M.)	237	KRECHMAR, David (D.B.)	231
DEAN, Paul (J.P.)	267	KROEHL, Wayne (W.E.)	222
DEKELVER, Don (D.L.)	238	KU, Raymond	223
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HEBERTON, Leslie		ERIKATSON, Gerry	279-8411
BOYARCHUK, Ed		GLENNORE CAUSEWAY	
FABIAN, John		DUSEN, Harvey	249-1449
LOHRT, Roger		FOOTHILLS HOSPITAL SITE	
5TH STREET SUBWAY		WILSON, Peter	283-6737
CHAM, Ray	261-0630		
<b>LRT ELBOV RIVER BRIDGE &amp; STAMPEDE RIVER BRIDGE</b>			
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Louis Courier	253-2044	Postal Station "A"	255-9979
Bankers Dispatch	243-4673	Post Office (Main)	232-5434
A.C.T. Business Office	231-2311	Atley's	266-6051
All Trans	253-6431	Parulator	275-2500
Air Canada Flight Booking	263-8555	Air Canada Flight Information	265-3090
C.P. AIR	265-8300	WESTERN AIR CARGO	277-7726
		AIRVELOPE	258-3570
<b>BRANCH OFFICE</b>			
YAMCOUTER	R.B. BUTLER	604-688-2451	04-507857
EDMONTON	R.D. GRANTHAM	482-4431	03-72025
RED DEER	B. DANILUK	343-2346 or 343-2347	03-83252
REGINA	L.K. MCHILLAN	306-584-8580	071-2499
WINNIPEG	G.K. DURBIN	204-786-7881	07-57318
TORONTO	H. SCLONIMKA	416-445-2304	06-966733
TORONTO (R.C.B.I.L.L.)	A. PERRIN	416-445-8844	
YELLOWKNIFE	R.H. BOOM	873-3861	
OTTAWA	J.H. DEACON	613-722-5856	053-4945
LETHBRIDGE	G.A. STEWART	328-5468	HOME: 328-1043
KELOWNA (O.P.T.C.)	T.A. HATCH	604-762-3727	
SASKATOON	M. PARCHEMSKI	306-244-6113	074-2683
<b>DIL &amp; GAS #2 Pina Building 736- 8th Avenue S.W. 269-8527</b>			
GREGG, J.M.	MAES, J.	Gregg, Brian	MERRELY, M.C.
SMITH, A.V.	GREGG, David		

RCPL Calgary staff list, dated 16 July 1978, with 128 employees.

facts that Deerfoot Trail had been designed to the standards of the day, a "state of the art" project, namely the 1975 (metric) RTAC Guidelines and Alberta Transportation's (non-metric) design standards. Alberta Transportation's "yellow pages" (= a colloquial term for an addendum to the RTAC Guidelines) had not existed in 1977. Since that time, many design standards had changed, and Alberta's (Ed said) were all available online in 2005. (just as in Arizona, I knew). Moreover, drainage design for the north end, by Avtar Gahunia, had included stormwater flow for the "50<sup>th</sup> Avenue Freeway", by oversizing of stormsewers. Safety barrier design had used the "little yellow AASHO book", precursor to the Roadside Design Handbook; Alberta Transportation's contact person on this was a Mr. Alex Nicolaichuk, P.Eng. in Edmonton. Mapping (at 1:1000 scale, by Keating) on several large mylar sheets, was used for the conceptual design. We prepared two sets of detailed design drawings (large and 11" x 17") and all revisions had to be made on both sets. Computer design was yet to be invented, except dial-up (to Toronto) for longitudinal grade lines and their printouts. K-type catchbasins were used in all roadside ditches, as garbage and fertilizer bags could clog up the system. Paint line widths at that time were 4", (changed to 6" wide). But when I asked about an "AASHO Controlling Design Criteria Report" for the project, (of which I had perhaps not been made aware in 1977/78), I got some (unexpected) stares from Ed and Clarence....<sup>23</sup>

"The Defense Team" developed common sense principles in Mr. Bomhof's office that day; below follows what I jotted down. These

<sup>22</sup> RCPL had a high staff turnover. This is evident from January 1975 staff photos that Tom Martin sent me.

<sup>23</sup> In 2005, this is what I was dealing with in Arizona on an almost daily basis. No is no such thing in Canada. Pity, eh?

two ideas have been in place for more than a 100 years at least, all over the world. (1) **Every driver is responsible for traffic in front of him or her.** (2) **The approach taken was that the design met design standards.** Ed also mentioned that Deerfoot Trail had multiple design speeds as it meandered from north to south: sometimes 80, sometimes 90 and sometimes 100 km/h.<sup>24</sup> The City had designed “Yield Ahead” and “Yield” signs for traffic coming west off Peigan Trail. Ed also produced the original design file(s), with a handwritten memo from “Aug. 27/77”, by CDK as the “designer”. Point 5 of that memo stated: **“RAMP 50 Ave W-B to DRFT S-B: Entrance to DRFT TR. S-B is SUB-STANDARD in Final Layout of DRFT TR.”** This was followed by statements on “Stage 1” and “Stage 2”, and a Conclusion: **“Build DRFT as if it were 3 lanes & place temporary curb for taper.”** Ed and Clarence also presented a handwritten “memo”, being the record of a September 1977 phone call that “approved” the geometry of the spiral length of this on-ramp, of which (both Ed and Clarence declared) the City and the Province had been made aware – as lengthening of this single spiral would obviously necessitate a wider and even “custom designed” east end of this complicated bridge structure (one that had likely already received many parties’ “approval” or was perhaps already at a stage close to tendering or construction. That particular “Office Memo” had been written toward the end of the preliminary design phase of the project, when the complete layout had only existed as a series of pencil lines on huge sheets of mylar.

After returning home, I received a letter from Earth Tech in Oak Brook, Illinois, USA, confirming “that Earth Tech will retain you as an independent consultant for the purpose of assisting in the defence of the legal action commenced against Earth Tech by the Plaintiff Robert Barratt – (the “Barrett action”) ..... at a rate of **\$ 75.00 per hour** (Canadian funds) plus any reasonable out of pocket expenses you may incur in furtherance of this retainer.” I accepted this and shortly received another (single) plane ticket and hotel booking, for a two-day visit to Calgary. In the meantime, I researched the internet about other cases with supposedly sub-standard<sup>25</sup> design features and how these had been handled in various States of the USA. To be forewarned is to be forearmed, I thought. I discovered various cases and had a pile of (ADOT-paid!) paper when returning to Calgary.

On 2005-07-04, Ed, Clarence and I first met in Mr. Bomhof’s office, where we met a Mr. William M. Everett, Q.C., from the Vancouver office of Lawson Lundell, the law firm representing Earth Tech (Canada) Inc., at 9.a.m. What had at first happened, (meaning: before I arrived in Canada) was the following (and I was not the only one who had done soul-searching and navel gazing) – Ed Tahmazian explained, according to my notes):

- The Agreement between the City of Calgary and RCPL, for a functional planning / route location study for Deerfoot Trail and a future 50 / 43 Avenue SE freeway, as the “public highway system”, had been signed on 3 August 1976. Alberta Transportation was not part of this Agreement, except to pay for fee overruns on APEGGA rates.
- On 27 August 1976, a City letter to Ed Tahmazian had mentioned “a decision on 50 Avenue between McLeod Trail and Deerfoot Trail will be deferred until further reviews are made.”
- During a meeting of 23 September 1976, Ed Tahmazian had said that vertical alignment standards may have to be dropped to a minimum of 60 mph, which was deemed acceptable.<sup>26</sup>
- Richard James had written Traffic Memos on 25 October 1976, 5 November 1976 and 17 November 1976. It was agreed that the “design year” for the project would be 1996.<sup>27</sup>

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<sup>24</sup> I recall that during our last three years in Calgary, the City was continually changing posted speed limit signs.

<sup>25</sup> The term “**sub-standard**” is never used in the USA, but always that it “does not meet current design criteria”.

<sup>26</sup> My hand-written notes add: (**Q.: What was it before?**) At that time, working with ADOT, the issue of Design Speed was constantly in my mind, as one of the AASHTO Controlling Design Criteria for all Project Assessments.

<sup>27</sup> In 2005, I knew that the (US) FHWA defines a “design year” as “**completion year + 20 years**”; could it be that Alberta (or Canada, for that matter) had no such “oversight rules” in the 1970’s? This section of Deerfoot Trail was completed in Dec. 1980, with the Mayor’s formal ribbon cutting ceremony that Tom Martin told me about. Its completion to Anderson Road occurred much later – and this was obviously not the end of the road either. “It was agreed” were Ed’s words.

- Meetings of 10 November 1976 and 15 February 1977 had resulted in a decision “three bridges must be constructed”. (Perhaps these three were to be designed by sub-consultants.)
- The “Functional Planning Review” report of December 1976 had stated: “Highway design practice recommends the design of facilities to carry 20-year forecast traffic.”
- On 9 December 1976, the 50 Avenue freeway concept had been approved. (This was the first meeting that Clarence Katzenberger attended.) Also, the at-grade intersections for Barlow Trail and the 50 Avenue ramps were approved, as the “first stage alignment”.
- The “source of borrow” was confirmed by a letter of 15 February 1977. As a result, “three bridges must be constructed” (– meaning “built before the material is moved”)<sup>28</sup>.

Now, what happened after my involvement started? These were my verbal contentions (and my perusal of the “Issued for Tender” drawings for Contract 7a in **2019** have confirmed my **2005 views – see below**):

- When detail design started, a whole stack of **blank** numbered mylar design drawings (as masters) were prepared, and for convenience’s sake, my initials were stenciled in by Janet Farmer, the drafts lady. Nothing had yet been designed on those drawings when this stenciling was done.
- My duties as Senior Transportation Engineer were “designing road barriers on urban freeway; checking plans for contract; liaison with sub-consultants on bridge layout drawings; fieldwork intended for summer” (as shown on my ITE membership application form).
- The fact that my initials appeared on the detail drawings for a proposed earthworks and utilities construction contract, could in no way be construed that I had been responsible for any (or all) of the design elements shown. Design has always been an iterative process.

This was all clearly sorted out in Mr. Bomhof’s office, and we were given a four-page handout with the title “Examinations for Discovery” to study and absorb for the rest of the day and evening. From 9:00 a.m. the next morning, we discussed the differences between a witness and a director / officer, between information and evidence, and what to do with questions to which the answer is not known. The four of us (but not Mr. Everett) then walked over (it was only a few street blocks) to the law firm for the Claimant, Miller Thomson, where we arrived just before 10:00 a.m. There all three of us were to be roasted individually, without having a chance to talk to each other during or after our sessions with the team. Clarence would go first, I would follow, and Ed would have his opportunity after lunch. During my “ordeal” that morning, however, I was able to state unequivocally that in 1978, I had not been aware (or been made aware) of the important “Office Memo” of September 1977, and that I had only seen it recently.

I now continue to copy the complete text of the 30+ pages, as the “**EXAMINATION FOR DISCOVERY OF JACOB DeRAADT**<sup>29</sup> **BY MR. MIDDLETON. HELD THE 5<sup>TH</sup> DAY OF JULY 2005**”. This was quite an experience! Starting at 11:30 A.M., a Mr. J.A. Middleton, Q.C. (council for the Plaintiff), started by:

**Q.** Sir, your name is Jacob DeRaadt. Is that correct? **A.** That’s correct. **Q.** I understand you’re a resident of Phoenix, Arizona. Is that correct? **A.** Avondale, Arizona. **Q.** Can you give me your address and your telephone number, sir? **A.** 10398 West Amelia Avenue, Avondale, Arizona, 85323-5603.<sup>30</sup> **Q.** Thank you. **A.** USA. **Q.**

<sup>28</sup> It is not quite clear which three bridges are meant. I guess: (1) The multi-purpose bridge; (2) one of the two Bow River bridges and (3) the 46 Avenue SE railway bridge, which was only a single wooden structure. Contract 7a (see Tender Notice below) included one two-span concrete bridge – which was the Heritage Drive SE overpass. Construction of the other structures had already been awarded before May 1978 (see below).

<sup>29</sup> Even lawyers could not spell my surname correctly!

<sup>30</sup> That was the ZIP code, and not the telephone number – which I never gave to him....

Thank you. Sir, you've taken an oath to tell the truth this morning. You understand the nature of that oath? A. Yes. Q. I understand that at one point in time many years ago you worked for what was then Reid Crowther. Is that right? A. Reid Crowther & Partners Ltd. Q. And you were employed by them. Is that correct?<sup>31</sup> A. Yes. Q. All right. Where are you employed now? A. With the State of Arizona. Q. And what -- A. Arizona Department of Transportation. Q. And what are you doing for them? A. I am a Transportation Engineer in the Predesign Section. Q. Okay. And -- A. of the Roadway Engineering Group. Q. How long have you been doing that? A. I've been there for three years and three months. Q. You were born in Calgary?<sup>32</sup> A. No. Q. You lived in Calgary for a number of years? A. Six years. Q. All right. Can you tell me about your education, sir? A. Yes. I was born in the Netherlands, had my elementary schooling there. Went to South Africa with my parents in 1952 when I was nine years old. Finished my high school there and my engineering degree at the University of Pretoria in 1965. Q. I see. A. Worked for two years for a consulting engineering firm, two years for the City of Pretoria Roads Department, then about six-and-a-half years for a consulting engineering firm in three offices, three locations, and then a year-and-a-half for a research organization in South Africa. Q. And then when did you come to Canada? A. In December '77. Q. I see. A. I was hired by Ed Tahmazian in May while I was visiting Canada, got a Visa to come to Canada, and I had to be there by the end of '77. Q. So I do take it, then, you worked for Reid Crowther & Partners from 1977 to sometime in 1983? A. No. Q. Okay. A. Mid-December 1977 till early September '79. Q. I see. So about two years, two-and-a-half years?<sup>33</sup> A. No, one year and nine months. Q. Okay, I'm sorry. I take it you are a professional engineer. Is that right? A. Yes, I was in South Africa, and then in Alberta. Q. So did you have to transfer your credentials<sup>34</sup> here in Canada or -- A. I had to apply here in Alberta with APEGGA. Q. And that was approved? A. That was approved. Q. So you are a P.Eng.? A. I'm now a PE in Arizona. Q. Okay. But at the time of this project which we'll talk about, you were a P.Eng. Is that right? A. Correct. Q. And did you have any particular specialty as an engineer? Were you a civil engineer -- A. Civil engineer by training. Q. And as it relates to the design and construction of highways, free-ways, expressways, on-ramps, what was your experience in that regard? A. My first two years in South Africa with a consulting firm was rural highway design and expressway design. My two years with the City of Pretoria consisted of all kinds of things. Q. Okay. A. In the firm I joined after that for six-and-a-half years, we did highway work. Q. Okay. While you were working for Reid Crowther, would you have described yourself as a road design engineer? A. Yes. Q. Okay. So you understand, then, that we're here in relation to an accident that occurred in January of 2003 and has given rise to litigation against, among other parties, Reid Crowther & Partners, or what is now Earth Tech. You understand that? A. I understand. Q. You understand that I'm just here to ask you some questions about your involvement in the design and construction of this -- A. Yes. Q. -- on-ramp? A. Yes. Q. Okay. Now, sir, I don't know if your counsel, Mr. Bomhof, has shown you these drawings, 29.11 and 29.14, which is out of the production of the City. A. Yes. Q. Have you seen these drawings? A. I've seen these drawings. Q. Just so we're clear, you're produced here today as a former employee of Reid Crowther. Correct? A. Yes. Q. All right. Now, I take it, sir, that your understanding of these drawings is that this represents the final design of the Peigan on-ramp as it intersects with Deerfoot Trail and, in fact, as it was built. Is that correct? A. These are as-built drawings, yes. Q. Is that correct? A. Correct. Q. All right. And on these drawings you are noted a "CKD," which I take it means checked the drawings. Is that right? A. Yes. Q. And your initials "JDR" are beside it. Is that you? A. That is me. Q. You have a recollection, sir, that the design team that was responsible for this and other parts of Deerfoot included Ed Tahmazian. Is that right? A. Yes. Q. It included Mr. Katzenberger who we just examined.<sup>35</sup> Is that right? A. Correct. Q. I take it it would also have

<sup>31</sup> Is there a difference between "working for" and being "employed"? This questioning irritated me from the start, particularly as I was (in 2005) getting into a strange situation in Arizona, with ADOT, due to my TN visa beneficiary status.

<sup>32</sup> Why this question? I remembered the RCPL project meeting with twenty professional engineers around a large board room table. Ten were Canadian born, two of them were Alberta born, and Mike Strong was the sole native Calgarian.

<sup>33</sup> This is an incredible gaffe by the lawyer.

<sup>34</sup> This was another dumb question, which I answered to the best of my knowledge and experience.

<sup>35</sup> When hearing this question, I already got a strange feeling that I was being "set up" as a scape goat, by (.....)?



included Janet Farmer. Is that right? A. Correct. Q. Are there other people on the team that come to mind that were involved? A. Actually, the initials "IJW", which is Ian Williams. Q. Yes. What did he do? A. He was involved in the team. Q. Okay. A. I also see "HEO", Harvey Olsen. Q. Yes. What did he do? A. He was involved in the team and outlasted me at Reid Crowther & Partners, because there's a date May 1983, issued for as-built.<sup>36</sup> Q. Okay. Anyone else that you recall? A. Richard James, Ian Morris, and what was his name? Peter Jenkin. Q. Sorry? A. Peter Jenkin. Q. Now, do I take that Mr. Tahmazian was the, for the lack of a better phrase, the project manager. Is that right? A. Correct. Q. Was he involved in the design of the road as well? A. Yes. Q. Okay. Did you report to Mr. Tahmazian? A. Yes. Q. Did you report to anyone else? A. No. Q. Did you have people reporting to you on this project? A. The draftsmen reported directly to me. Q. Right. That would have been -- A. But I was new in the office at the time. I did not expect to have a supervisory position from scratch. Q. Right. But do you recall Mr. Katzenberger sort of reporting to you on this project? A. No. Q. Janet Farmer, she was a draftsman? A. Yes. I told her this and that has to be done on the drawing, in that informal sense, yes. Q. Right. But you would have had involvement with Mr. Katzenberger, though? A. On a daily basis. Q. Yes. Relative to the project? A. Yeah. Q. Let me ask you this, sir: When I say "this project", I want you to understand that I'm talking specifically about the Peigan on-ramp as it intersects with Deerfoot. Okay, you understand that? A. Yes. Q. What was your role on this project? A. My role was to do detailed design and to prepare all the quantities and calculations for a massive earthmoving contract, which was I believe there's contract 6 or 7a. There were various contracts on the project. 7a was I think the earthworks contract. Q. So your role was to be involved in the design of the on-ramp? A. Detailed design, yes. Q. When you say "detailed design", what do you mean by that? A. Detailed design means the cross-sections, the real -- where the rubber hits the road, quantities and details that a contractor would need during construction. Q. I see. And did you work closely with Mr. Tahmazian in that regard? A. Yeah. Q. Now, Mr. Katzenberger has testified earlier this morning that it was his perception that you had some involvement<sup>37</sup> in the drainage? A. Yes. I did personally do the -- all the drainage calculations for storm water management of the whole section from beginning to end, and those had to be presented to the City. Q. Okay. How involved were you on the actual design and construction of the on-ramp onto Deerfoot? A. Construction or design? Q. The design. A. Design, these lines. Q. Sorry, what are you referring to? A. These lines. Q. That won't register. A. The line -- this line is the limit of construction. Q. Sorry. A. Drawing 29.11. Q. Yes. And you're referring to? A. To the line that shows the top end of the excavation. Q. Yes. A. Because that comes from the cross-section which was developed. Q. Yes. A. By manual methods. These days it's all done by computer. These spot elevations, as you can see them, they're on the road at centre line and at edge of -- edge of pavement I think is the term used, or edge of travel lane. These bottom ditch elevations. Q. Yes. A. The catchbasins are not shown on this drawing, but they're shown on a similar drawing of the same series. Q. Okay. A. These arrows show the drainage pattern in the big cut that's there. Q. Let me stop you there. Were you involved in the actual design itself of the actual on-ramp? Not necessarily the drainage beside it or anything else, but the actual on-ramp itself. Were you involved in that? A. The detailed design, yes. Q. All right. A. Meaning -- meaning these spot elevations, checking the numbers that they were correct from what had been previously approved. Q. Okay. So I take it you were involved in the -- I think Mr. Katzenberger described it as the mathematization -- A. That's right. Yeah, using mathematics. Q. Is that right? A. Simple mathematics, geometry, things you do on a hand-held calculator even. Q. Right. A. Cross slope. Q.

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<sup>36</sup> This means that Harvey Olsen signed the as-built drawing(s), though he had not been involved at all with the design of the Deerfoot Trail project. When joining RCPL in the beginning of 1979, he first supervised construction of the 5 Street SW subway and then the Glenmore Causeway (see staff list). Before joining RCPL, he had supervised the CPR railway twinning at Lake Louise. I do not know what particular design experience he had before 1979. He later became RCPL's Calgary Office Manager and also ITE District President. I once saw him shortly in Market Mall during the mid-1990's.

<sup>37</sup> Another suspicious question that put me in alert mode. "Some involvement" was a substantially huge understatement.

Right. Just so we're clear -- and I asked Mr. Katzenberger this. You understood that this on-ramp, the Peigan on-ramp, was originally designed to ultimately accommodate the 50<sup>th</sup> Avenue freeway. Is that correct?<sup>38</sup> A. Yes. Q. And when I say that, I mean the Peigan on-ramp was going to be, for lack of a better word, assimilated into the 50<sup>th</sup> Avenue freeway at some point in the future, which was at that time undetermined. Is that right? A. That's correct. Q. Okay. And we know that didn't happen. Correct? A. I have recently heard that it did not happen. Q. Okay. A. At that time I did not know that. Q. Fair enough. But it never did happen, I think we can all agree on that. A. Right. Q. Tell me, this on-ramp, when it was designed, was it designed to be a yield condition or a merge condition? A. I do not know. Q. You don't know? A. I don't know. Q. You know that it was ultimately designed to be a yield condition. Correct? A. I do not know. Q. Okay. A. I was designing an earthworks contract. Q. But you were involved in the design of the on-ramp, though. Right? A. But not in the signing. Q. You had no idea what this on-ramp was going to be, whether it was going to be a merge or a yield condition? A. No. Q. Why not? A. I understood -- or I understand now that that was not part of Reid Crowther's design function. Q. What wasn't? A. Signing. Q. Okay. Fair enough, though, sir, but you'd understand it when you're designing a road, you would certainly as a designer want to know what kind of a traffic control signal was going to be there, wouldn't you? A. That was another facet of the project. Q. Right. A. To be done by the City. Q. Right. But you don't design a road in a vacuum without knowing whether there's going to be a traffic light or a stop sign or something else there, do you? A. It was not part of my function. Q. What was not part of your function? A. Checking for what condition this was to be designed. Q. So this on-ramp, then, was designed by Reid Crowther in a vacuum then without knowing what you were supposed to design it to? A. I designed the detail design and prepared the drawings according to what had been approved before. Q. By who? A. By -- Reid Crowther and the City mutually agreed before detailed design started. Q. Okay. You signed off on this drawing, which is 29.14 and 29.11. Is that right? A. No, this is sealed and signed by Ed Tahmazian. Q. Fair enough. When I say "signed off", I mean you checked these drawings. Is that right? A. My initials, they are there, yes, on a whole series of drawings. Q. Do you remember checking these drawings? A. Checking my work. Q. Right. Which -- A. Yes. Q. Which includes the design of the on-ramp. Is that right? A. Checking the design, detailed design of the calculations -- Q. Yes. A. -- regarding slope elevations, distances, drainage patterns, -- Q. Yes. A. -- spelling. Remember, this was manual drafting at the time. Q. Yes. So you checked the drawings that are in front of us here, which included the design of the on-ramp. Is that right? A. Yes, but -- and this was a repetitive process. Q. Yes. A. Not at one shot. Q. Understood. But these drawings that you have in front of you, you checked these. Correct? A. Yes. Q. Okay. And you checked them to -- A. I checked them prior to tender. I did not check the as-builts, because I was not with Reid Crowther anymore at that time. Q. Well -- A. Remember that there are phases in the project. You have here the various "issues" of the drawing. You see "issued for tender", "issued as addendum", "issued for construction". Q. Sir, as I understand it these are the as-builts. A. I did not check the as-builts. I had left Reid Crowther already at that time. Q. When did you leave Reid Crowther? A. September '79. Q. These are January of 1978. A. That was during the design. In January I had just started working for Reid Crowther. Q. Right. A. Somebody decided that yes, this set of drawings will be checked by Jacob de Raadt, and Janet Farmer put "JDR" on a whole series of my other drawings, blanks, even before the design was done. Q. What I'm asking you is: Did you check these drawings? A. Yes, when the design was done, not when the drawing was prepared. Not when my initials were put there. Q. Okay. A. A few months later. Q. You'll agree with me that what's on this as-built is what was built out there? A. Sure, it was built. Q. So with all of the geometry and the calculations and the lane widths and what not, that is what went out there, that's what has been built out there. Correct? A. Some changes on the drawings may have been made during construction. That is why you have an as-built drawing. I never saw that. Q. Okay. This drawing here is the as-built. A. Yeah. Q. And your -- A. I did not check the as-built. Q. Well, your initials are on it. A. During the

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<sup>38</sup> The City required that drainage calculations allowed for a completed Peigan Trail freeway interchange, with 90% runoff factors. Avtar Gahunia had designed the system for Contract 7a, I later had to prepare the drawing for the 1675mmØ concrete pipe through the huge berm, because this had not been done in time for tendering Contract 7a.

design phase I checked the drawing. Q. Right. And I'm telling you that the original design for the on-ramp is what was built. A. If this is the original design drawing. It isn't, this is the as-built. Q. Okay. A. For all I know, during construction they could have changed things. Q. Okay. A. I do not know that. Q. Right. But this is an as-built. A. Yeah. Q. You've checked it? A. No, I didn't check the as-built. Q. Well, your initials are on it. A. The as-built is dated May '83. Q. Okay.

[Mr. Bomhof: Can we go off the record a second? (Discussion off the record)]

Q. Mr. Middleton: Sir, have a look at document -- or drawing 29.14. A. Yeah. Q. Do you see where the on-ramp is depicted on that drawing? A. Yes. Q. And you'll see that it has a variety of numbers and hash marks and notations on it. A. Mmm-hmm. Q. Correct? Mmm-hmm. Q. Yes? A. Yes. Q. Okay. Were you involved in the development of things like lane widths, acceleration lanes, those sorts of things, on the on-ramp? A. No. That had been determined before detailed design started, -- Q. Okay. So you -- A. -- but I was responsible for checking that that information was correctly depicted on the drawing, -- Q. Okay. A. -- for use by the contractor. Remember, this was at that time a drawing for as construction project. The contractor needs to know what he has to build. Q. Okay. So you were not then involved in developing the geometry of the ramp? A. The geometry was given prior -- was given to me as a -- as the basis on which a detailed design needed to be prepared. Q. Okay. And then when you talk about detailed design, what are you talking about? A. I'm talking about the details of the work that needs to be constructed. Q. Meaning what? A. Meaning spot elevations, meaning widths, meaning side slopes, meaning drainage patterns, meaning location of light poles on the concrete median barrier shown here. I see the catchbasin on this drawing, there is not one on the other drawing. The fact that there's a concrete nose, the fact that there's a curve, the fact that there are utilities under the highway. All those things need to be shown, so the contractor knows when he has this drawing on the site, he says, o yes, there's a utility right here; I have to be careful, don't dig too deep. Q. So in terms of lane widths and acceleration lane lengths, those had already been determined before you got involved? A. Yes. Q. And who were they determined by, Mr. Katzenberger? A. By Reid Crowther & Partners? Q. Right. A. In a previous phase; in a phase of the project prior to detailed design. Q. Okay. So it wasn't like you're telling me this drawing was presented to you and that you checked it over and gave it the okay. It was already done. Is that right? A. The centre line was done, the centre line of Deerfoot Trail. This alignment, the centre line was struck. That's the term we used. Q. Right. A. Before detailed design was started. Q. Okay. A. I had to flesh it out. You understand that term? Q. So you were not consulted or involved in making the decision as to whether this was going to be a yield condition or a merge condition? A. I can't remember that I was even told about that. Q. Okay. Was it part of your responsibility, sir, then, to determine whether or not the proposed design was in conformance with prevailing guidelines of the day? A. For some of them. Q. Okay. Was it within your role at that time to ensure that the design of the on-ramp was in compliance with the prevailing design guidelines of the day? A. No. Q. That was not part of your functions? A. No. Q. Whose function was that? Was it Mr. Tahmazian's function? A. Yes. Q. Okay. So it was his responsibility to determine and make sure that the design of the road was in compliance with the prevailing guidelines? A. In consultation with the City. Q. Right. But in consultation with you or not? A. No, it had been done before I started working for the firm. Q. Okay. So that was not part of your role? A. No. Q. Did you have some familiarity at the time with the RTAC guidelines? A. RTAC I knew about in South Africa as the Canadian Good Roads Association. Q. Right. A. The first RTAC metric manual was developed in 1975. I believe there were some copies in the office. Q. Okay. So you did have some familiarity with those guidelines? A. Some. Q. What about the AASHTO guidelines? A. I've known about the AASHTO blue book of 1954 since my very first day working for a consulting engineer on the 2<sup>nd</sup> of January 1966. Q. Okay. So your answer is yes? A. I knew some familiarity. Yes, these are design guidelines. Q. Right. What about the prevailing Alberta Government highway regulations of the day, were you familiar with those? A. A

copy of those was in the office. **Q.** Okay. But you're telling me that in the role that you occupied for the year-and-a-half<sup>39</sup> that you were at Reid Crowther, that ensuring that this on-ramp was in compliance with whatever regulations or guidelines were present at the time was not part of your function. Is that correct? **A.** Correct. **Q.** And your input as to whether this on-ramp was going to be a merge or a yield, you had no input on that. Is that what you're saying? **A.** Correct. **Q.** Okay. You're suggesting that those decisions were essentially already made by the time you came on. Is that right? **A.** Yes. **Q.** So in terms of the geometry and the calculations and the numbers that appear on 29.14, it would have been your role at the time, then, to ensure that those numbers were complied with? **A.** Yes. **Q.** Right. **A.** Spot elevations, yes. Ditch elevations, station elevations and numbering, yes. **Q.** Right. When was the on-ramp actually -- when was it completed, do you know? **A.** Completed? **Q.** Construction completed. **A.** It shows on the as-built. 1983, but I -- after I left Reid Crowther in September '79 it was completed by the concrete pavement contractor, and it was probably open to traffic end of '79 perhaps, early -- end of 1980. **Q.** So you were gone by then? **A.** Yes. **Q.** Is that right? **A.** Yes. But the contract for concrete pavement was not awarded while I was still with Reid Crowther. I know they were busy with subgrade, and there is also an asphalt levelling course underneath the concrete. **Q.** Sorry, when did you arrive at Reid Crowther again? **A.** December '77. I arrived in Canada on the 6<sup>th</sup> of December '77, and I started work on the 12<sup>th</sup> of December. **Q.** Why don't you have a look at this note from Mr. Katzenberger. **A.** I saw it a month ago.

[Mr. Bomhof: I'm sorry.] **A.** A month ago. [Mr. Bomhof: We'll look at it.]

**Q.** Mr. Middleton: You had a look at it a month ago. **A.** Yeah, he<sup>40</sup> showed it to me, and I recognized the project number.<sup>41</sup>

[Mr. Bomhof: Wait for his question. **A.** Sorry.]

**Q.** Mr. Middleton: Do I take it, sir, that before the final design was signed off relative to the on-ramp, that Mr. Katzenberger had made some notations about his concerns regarding the on-ramp? **A.** I found out --

[Mr. Bomhof: This is not a relevant question. This note was prepared before his arrival. Mr. Middleton: Well. I'm going to ask him if he ever either received it, saw it afterwards or talked to Mr. Katzenberger. I'm well aware it arrived before he did.]

**Q.** Did you discuss the contents of this note with Mr. Katzenberger? **A.** I never saw it. **Q.** Did you discuss any concerns that Mr. Katzenberger had relative to the on-ramp? **Q.** He says that he passed this information on to you.<sup>42</sup> Do you have any recollection of that? **A.** No. **Q.** Do you have any recollection at all that concerns were raised about the design of this on-ramp? **A.** No. **Q.** No one said anything to you about -- **A.** No. **Q.** -- the concerns about the on-ramp? **A.** No. **Q.** Okay. As far as you were concerned it was designed and constructed properly?

[Mr. Bomhof: Don't answer that question. (**Objection**).]

**Q.** Mr. Middleton: Well, I guess as far as you were concerned it was designed and constructed according to these plans. Is that right? **A.** I was not there during completion of the construction. **Q.** Right. Did you have any concerns at all about the geometry of the on-ramp before it was constructed? **A.** No. **Q.** But again, you're saying to me that that may not have been part of your role? **A.** Correct. **Q.** Okay. Do you know if Mr. Tahmazian had any concerns about the design and construction of the on-ramp that he had discussed with you? **A.** No.<sup>43</sup> **Q.** And you're telling me that you have no recollection of any conversations with Mr. Katzenberger regarding the design of the on-ramp? **A.** No. **Q.** Okay. Would it have been part of your role to determine whether or not the

<sup>39</sup> Thinking about it now (2019), it was already in the beginning of 1979 that I was unceremoniously transferred to the Municipal Division – in the east expansion of the building. I had hardly any contact with Ed Tahmazian and Clarence Katzenberger after that, and that is why I was so strangely considering my answer “Mmm-hmm” on the Landscaping Drawing 29.14 – which I definitely did not “check”.

<sup>40</sup> I meant Mr. Bomhof.

<sup>41</sup> Meaning: RCPL Project number 20567.

<sup>42</sup> Is this proof that I was being “set-up” to become a scape goat? This had not been discussed in Bomhof's office.

<sup>43</sup> In my e-mailed response to Mr. Bomhof, I wrote: “Mr. Middleton is putting words in my mouth. I never said that Mr. Tahmazian discussed concerns about the design and construction of the on-ramp with me.”(!)

design as submitted or depicted in these drawings complied with the prevailing guidelines of the day? A. I was never asked that question. Q. That was not part of your job description at the time? A. No, that had been determined before details design was even started. Q. So, sir, are you saying then that after the road was constructed and these drawings were produced<sup>44</sup> that someone put your initials on as you being the one who checked them? A. Could you repeat that? Q. Is this what happened? I guess I want to know how it came to be that your initials came on these documents. A. Well, when detailed design started, as you see here on 29.11, you see a whole series. This thing right in the middle at the bottom. Q. Where it says geo -- A. Below that. Q. Yes. A. So we had the project all drawn out on mylar, the mapping. Q. Yes, A. At 1 in 500 scale, and somebody had to determine how many drawings are required for the tender documents to tell the contractor what he's got to build, and this whole project was laid out from here to there, with a little bit of overlap as you can see, this is T3-13. So T3-1 is here, then T3-2, T3-3, T3-4, etc., T3-13, etc. The whole project limits were basically covered by these plans -- not these ones, but bigger ones, proper scale, 1 in 500 scale. They were placed on the mylar and traced from there, and they were given their numbers. Q. So we heard about this mylar thing this morning. A. Yes. Q. You would not have been involved with that? A. No, these were the masters. Q. Right, understood. But you -- A. And on these "masters" the design was done. With these lines, these were all put on much later. Q. I understand that. A. But when these drawings --

[Mr. Bomhof: Let him ask you the question. A. Sorry.]

Q. Mr. Middleton: You just want to go on and on here. A. No, you ask me the question whether --

[Mr. Bomhof: Just let him ask you the question.]

Q. Mr. Middleton: Just hang on. We talked about this mylar thing this morning, which is now what you've referred to. What I want to know is when that stage was done, were you around? A. Yes. Q. Okay. A. January '78. Q. Okay. So you were involved in the stage where it was drawn out on this mylar. Is that right? A. Janet Farmer did that, yes. Q. You were there to do what? What was your role at that point? A. My role was -- Q. What did you do? A. My role was to do the detailed design, and somebody determined Jacob de Raadt is going to check the drawings. Q. Right. A. And the initials -- my initials were put on that before the design was done. Q. Okay. So that brings me back to what I was asking you before, about how it was that your initials found their way onto these drawings. A. Correct.<sup>45</sup>

[Mr. Bomhof: How did these initials find their way onto these drawings? A. They were traced there by Janet Farmer. "JDR" on drawing T3-1, T3-2, T3-3, ----- T3-14, T3-15. The whole series of drawings have "JDR" on them.]

Q. Mr. Middleton: Okay. A. But that was done in January '78. Q. Yes. A. Design had just started. The design had not been done. Q. Right. A. The centre line was traced first of all from the mylars. Q. Right. A. And then all these lines, as we went along, the information was prepared and put on, maybe by pencil, and then ink eventually. Q. Right. A. And then they came back to me and I checked. Well, if the numbers are correct. 39.730, correct, and so on. Q. Where are you referring to 39.730? A. Oh, one spot elevation at random.

[Mr. Bomhof: On document 29.11.]<sup>46</sup>

Q. Mr. Middleton: All right. Well, I guess I don't have any more questions for you, sir. I know that your counsel mentioned to me that you might not be adding a whole lot more in terms of the design, but I wasn't sure that it was this sparse.<sup>47</sup> There may be other questions from people that are here. Any other questions?

[Mr. Johns: I have a few questions that may or may not be helpful.]

**EXAMINATION BY MR. JOHNS:**<sup>48</sup>

Q. Sir, my name is Johns, and I act for one of the drivers involved in the collision. If I understood your evidence earlier, you did all of the earthmoving design work -- A. Yes. Q. -- is that right? So would that involve

<sup>44</sup> As if anyone would dare to construct a highway and prepare plans afterwards! A dumb lawyer's question or a trick?

<sup>45</sup> Did Mr. Middleton really want me to repeat myself? I had just given him a detailed answer.

<sup>46</sup> Mr. Bomhof realized quite well that I had nothing to do with (Dwg.) 29.14. That is why he spoke up.

<sup>47</sup> In my comments to Mr. Bomhof, I wrote: "Is the term "**this sparse**" meant in sarcasm, irony or frustration?"

<sup>48</sup> Mr. Johns was the legal counsel for Mr. Klassen, the driver of the first vehicle (arriving from the on-ramp).

detailing for the contractor where to cut and where to fill? A. Correct. Q. Would you identify where to cut precisely on some sort of drawing? A. Well, these lines, these long lines and these short lines next to each other, that identifies a cut. Q. Okay. A. This shows the slope, 3:1, and the long lines -- the long lines and the short lines are normally at the top of the cut. On the other drawing -- now, you don't see any fill here, but a fill would be the opposite way around. So if you have a fill going from the road to existing ground there, your short lines would be here and your full or long lines would run to the bottom. Q. And that -- A. This is a massive fill here and a cut on the other side. Q. And that -- A. Standard engineering practice, drafting practice. Q. Those plans also involve the drainage through the ditches as well? A. That's right. Q. Now, you've been referred to these drawings that have been produced by the City, 29.11 and 29.14, and this shows -- 29.14 shows the entrance ramp that's in question in these proceedings, and there's a series of typographical lines just below the ramp. A. Yes. Q. What do they indicate? A. This indicates landscaping details. There was a landscaping consultant also on this project, because the City's involvement with foot and bicycle paths and all these things and so on. You can see it comes underneath the bridge and winds up here. Q. I see. A. And this berm -- this bicycle path needs to be shielded from noise, from the highway. Q. So you are saying that that -- A. So these aren't always compatible. Q. Are you saying that this four-metre high berm was not an actual hill but rather was placed there? A. Landscaping architects work in a different way. They draw things in circles. Engineers normally draw things as slopes. Q. Okay. A. So part of this four-metre berm is -- now it says 4:1 slope here, this is a 3:1 slope. There's a contradiction. I realize that. It may well have been that the top of this four-metre berm was existing ground and was basically here. Now, as we know the WID canal is right here, so this slopes down anyways. Q. Right. So you can't tell from these drawings whether this berm was natural or man-made? A. No, I cannot. Q. What drawings would you look at in order to make that determination, or would there be such drawings? A. You mean what really was built? I don't know. Q. Well, no. I guess what I'm trying to figure out here with your help, hopefully, is whether it's possible to determine from any of the drawings that might have been created at the time whether or not this four-metre high berm that we've been referring to was natural or was man-made in the course of earthmoving. A. I think it was -- this was natural. Q. Well, how can you say that? A. Because -- because the slope folds this way, so it would have been coming up. Q. But my question was really would there be some drawings, topographical maps or some sort of reference that we could confirm that, aside from your educated guess? A. No.

[Mr. Bomhof: Do you know? A. No.]

Q. Mr. Johns: All right. I think you told us earlier that the City wanted that berm there to shield the bicycle path. Is that what you said? A. Yes. Q. To shield it from noise? A. Highway noise. Q. And presumably in the course of constructing Deerfoot Trail and this on-ramp, you would have had a lot of earthmoving equipment moving a lot of earth around?<sup>49</sup> A. Yes. Q. So had it not been for that desire to shield the bicycle path, presumably this four-metre high berm could have been shaved or reduced? A. No. Q. Why not? A. These drawings are of a later date. You see, on this drawing there's a number here, 6. -- see this was contract 7a, which was the major earthmoving contract. And this drawing shows 6 right here -- Q. Which one are you referring to now? 29 -- A. 29.14 is actually contract number 6. You see that little 6? Q. Your eyes are good. A. This is a landscaping contract drawing, which was prepared much later than this one. Q. 29.14 is much later than 29.11? A. And you see that also, because it says -- the date there says June '79. Q. Okay. So what's the significance of what you just told me? A. The significance is: After this earthmoving contract had been completed, the landscaping architect did his job and came up with this kind of thing to enhance the -- the surroundings. Q. All right. So does that tell us anything about the four-metre high berm and why it's there? A. Yeah. Q. Pardon? A. Yeah. Q. Yes, it does? A. Yes. Q. What does it tell us? A. They<sup>50</sup> wanted a four-metre high berm. Whether it was natural or had to be built up, I don't know. This obviously shows the existence --

[Mr. Bomhof: Wait for his question.]

<sup>49</sup> Dumb lawyer's question? Equipment noise is only temporary, while traffic noise is permanent (after completion).

<sup>50</sup> I meant the City of Calgary.

Q. Mr. Johns: Now is this boundary on 29.14, this line that I'm referring to here, is that the boundary within which you had to design? A. That's the property line. Q. The property line? A. "PL" means property line. Q. Okay. So that is -- that was within your -- by "your", I should say within Reid Crowther's scope of -- range of design work? In other words, for the earthmoving? A. Project limits. Q. Project limits? A. Yes. You note it's different on the two drawings that were prepared. Q. Sorry, what's different on the two drawings? A. This line is not the same as this line.<sup>51</sup> Q. Okay. A. This drawing is a year later. New information caused that. Q. Now, is the course of designing the earthwork, the earthmoving work -- are you with me, sir? A. Yeah. Q. In the course of designing the earthmoving work for the project, would you typically be involved in considering the sight lines along the highway? A. Not for detailed design. Q. Not for detailed design? A. No. Q. Would you agree with me, sir, that generally as a matter of practice in the industry that the sight lines around curves are a concern for road designers? A. Yes. Q. And would you also agree with me that it's good road design to ensure good sight lines around curves? A. Not during detailed design. Q. Well, I'm talking more generally speaking. Generally speaking -- A. That is normally agreed upon in preliminary design phase. Q. But you would agree with me -- A. Yeah. Q. -- that generally -- A. Yes, generally, sight lines are required, horizontal and vertical. Q. So you don't know if this four-metre high berm was existing or it was later built up, you can't tell me anything about that today? A. It was designed by a landscape architect. Q. But I just want to make -- A. Yeah. Q. -- absolutely sure that there's nowhere we can look to find out what the original ground level was. Is there anywhere that you think we could look for that?

[Mr. Bomhof: Do you know?]

A. The mylars would have shown it. Whether they still exist I don't know. Whether it still exists, I don't know.

[Mr. Bomhof: Mylar is, as my understanding, a broad term for the type of plastic, and there are many mylars, and I don't have them in my possession, and I -- I have everything. I don't have those mylars.]<sup>52</sup>

Q. Mr. Johns: So now they're buried under a new neighbourhood here in Calgary. So that's the only place you think that they might exist is on -- that information might have existed, I should say, and that is on the mylars. Is that what you're telling me? A. And on the cross-section drawings. Cross-sectional drawings. Q. And the cross-sectional drawings would show -- A. Every 20 metres there's a cross-section drawing that shows the line -- this line as it was there. Q. And those cross-sectional drawings are done before this 29.14 -- A. Yes. Q. -- would have been done? A. Yes. Because the earthmoving contract preceded the landscaping contract. Q. Okay. So we might be able to see what the original ground is from these cross-sections? A. If you look at this -- the drawing of this part of contract 7a for this area, yes.

[Mr. Bomhof: Just off the record. (Discussion off the record).]

Mr. Johns: Mr. Bomhof, I think we've agreed off the record that what we'll try to do is identify the cross-sectional drawing that might give us some insight as to whether this four-metre high berm was original ground or was man-made, and if we can identify those drawings, whether from your client's records or from other production, we may -- I may want to have this witness review those drawings and advise me by way of undertaking whether or not he can determine from the drawings whether the berm was original ground or man-made.

Mr. Bomhof: Okay. As I mentioned in our off-the-record discussions, I'll take that under advisement.

**UNDERTAKING NO. 1 – IDENTIFY THE CROSS-SECTIONAL DRAWING THAT MIGHT GIVE SOME INSIGHT AS TO WHETHER THE FOUR-METRE HIGH BERM WAS ORIGINAL GROUND OR WAS MAN-MADE, HAVE MR. DERAADT REVIEW THOSE DRAWINGS, AND ADVISE WHETHER**

<sup>51</sup> Project limits differed between 29.11 and 29.14. The City owned all the land, and wanted a berm.

<sup>52</sup> The mylars were obviously large sheets of plastic film on which the topographic survey (by Keating) had been plotted. It was clear to me that Clarence Katzenberger had already enlightened Mr. Middleton on this, and only gave my view of the detail design process, with a different nomenclature. From designing the McKenzie Avenue Interchange in 1991/93, (the very first fully computer-designed interchange in British Columbia), I realized that by 2005, hardly anybody knew how things had been designed before. Returning to Arizona made me think to start writing my Memoirs.

OR NOT HE CAN DETERMINE FROM THE DRAWINGS WHETHER THE BERM WAS ORIGINAL GROUND OR MAN-MADE (UNDER ADVISEMENT).<sup>53</sup>

Mr. Johns: Sir, those are all the questions I have. Please answer any from my friends.<sup>54</sup>

(Examination adjourned at 12:23 P.M.)

Plans -- Ozalid (paper) or mylar copies of survey plans are available to plan-searchers. Plans may also be loaned to Alberta Land Surveyors who wish to make their own copies.

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I basically stuck to my guns that I had been hired by RCPL to assist in the production of a Tender Document for a major metric earthworks and road construction project, with relocation of utilities. I said that I had started to work in mid-December 1977; that I had no reason at all to review all the firm's design files about the project, and that I was not asked to review the preliminary design. (Working in Arizona at the time, and having had more hands-on experience with "stopping and passing sight distances",<sup>56</sup> I could have said more about that, but was not asked. I did not have that knowledge in 1978.) I never saw Ed or Clarence again that day, or later. After returning to British Columbia in early 2008, I once saw a notice in Innovation magazine (APEGBC) that he had been hired or retained by Urban Systems, a consulting engineering firm in Richmond, BC., one of whose principals, Fraser Smith, P.Eng., I had known when working (as Grassroots Consulting Services) on several land development projects for clients in the City of Surrey.

On 2005-08-22, Mr. Bomhof sent me a .pdf file of the above enlightening (I hope) 38 pages of my discovery, with a request "that you please review the transcript and provide me with your comments." There were a few spelling errors – "fuel" for "full", "side" for "site", etc., but I took 3 hours to write a proper response, and e-mailed that to him on 2005-08-25. His next e-mail dated 2005-12-03 mentioned that "The trial is currently scheduled for April 2006. I do not expect that you will be called as a witness at the trial but I will advise you in advance if that becomes necessary. Regards." On 2006-01-03, another e-mail came from Calgary, in which the **letters were turned by 90 degrees** if one tried to print it: (as a security feature, I guess, or as "legalese"?) – see the **next page**:

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<sup>53</sup> I was never even questioned on this matter. But I believe RCPL would (or should) have kept the topographic mapping mylars, prepared by Keating, one of Calgary's aerial photogrammetry firms. I once visited their office, when asking for a mapping extension near the old silos and railway crossing on Heritage Drive SE. The Plaintiff might also have had some better luck with questioning the **landscape architect**, whose work actually "messed up" an already tight traffic condition (horizontal sight distance, on a spiral on the inside of a horizontal curve at a bridge approach) by raising a berm, thereby decreasing vertical sight distance. It is never good to use minimum horizontal and vertical design criteria at the same location, the AASHTO Guidelines (Green Book at the time) and the RTAC Guidelines are very clear about that.

<sup>54</sup> I have often wondered why lawyers call each other "friend" – is this sarcasm, irony, humour or just jest?

<sup>55</sup> Included to prove that "mylar" was a generic name for plastic, an excerpt from "An Introduction to Alberta Land Titles" (1985). Later, when working for UMA, I was given excellent service from the South Alberta Land Title Office staff on 7 Avenue SW, when asking for copies of legal plans or descriptions. I went there by bus, straight from the UMA office, and back. I am pretty sure that mylar is no longer made, due to changes like computer printing and huge .pdf files.

<sup>56</sup> Stopping sight distance around a median barrier was a specific challenge on Highway 19 (an expressway) near the curve at Vanalman Avenue, Saanich, which I designed in 1991 while at Crippen Consultants, as part of the McKenzie Avenue Interchange project. As a result, this concrete median barrier was not placed in the middle of the median. I think that we used the phrase "decision sight distance" for that situation, because drivers want to change lanes.



“Mr. De Raadt, I am writing to advise you that the litigation involving Earth Tech Canada Inc. concerning the design of the Deerfoot Trail highway and Peigan Trail On-Ramp has been resolved pursuant to an agreement between the parties. Thank you for your assistance in this matter. Yours truly, ...” I concluded that Action No. 0301-12333 in the Court of Queen’s Bench of Alberta, Judicial District of Calgary had been settled out of court. The content of that agreement is obviously not (yet) publicly known. Do I want to know? Do I care? I do not know why, but somehow, the refrain of “The Charge of the Light Brigade” comes to mind again. (See my Part 2.). That day, I received my first payment from Earth Tech Canada Inc. Here is the reason for the delay:

I apologize for the long delay in forwarding this payment. We had initiated some new handling procedures due to the Sarbanes/Oxley Act, and unfortunately, due to a flaw in those procedures, your invoices got placed on hold. Again, I apologize for this delay.

I guess that’s what happens when Canadian consulting engineering firms are sold to Americans like “**Earth Tech - A Tyco International Company.**” It becomes beholden to the rules of the United States of America. What do I care about the Sarbanes/Oxley Act – a.k.a. SOX? Earth Tech is now part of an even larger conglomerate firm called AECON – just like Underwood McLellan and Associates (UMA), the other firm I worked for in Calgary, which had been gobbled up in the summer of 2004. (See below.) But I felt good about a little “back pay” from the firm that was somewhat known in Calgary for hiring and underpaying professional engineers who were immigrants. My total remuneration in 2005 for my only “interrogation ordeal” of this kind, was **Can\$ 3,951.08**. Did that make me an “expert witness”?

About this supposed **underpayment to immigrants**, the following: Peter Jenkin<sup>57</sup>, a single Australian, had been hired for the actual site supervision, on some short-term visa that had to be renewed at the Federal Building downtown. Mr. Bob Shortreed, the Office Manager, had to go with him to sign some document. While Peter stood at the till (he later told us) handing in the paperwork, the clerk commented: “Oh, Reid Crowther & Partners, eh? Isn’t that the consulting firm that hires all these foreigners and pays them a pittance?” As Peter told us in the office that afternoon, he had not known how to respond, knowing that the Office Manager stood just behind him! The staff turnover was fairly high. Ian Williams had already been with RCPL for about a year when I arrived, but he went to Damas & Smith in the spring of 1979, long before I was let go, and then to Stanley Associates Engineering Ltd., where he remained for many years (through a few relocations: Surrey, Kelowna, Victoria). We had a little oriental fellow with a degree from Buffalo NY, (supposedly unacceptable for EIT status with APEGGA), who was looked down upon by some, and I felt sorry for him. I tried to mentor him by providing assistance with some of his work. I am not sure how long he lasted. Ian Norris, a British immigrant was on the team at RCPL when I came (and did computer programmed checking of quantities and

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<sup>57</sup> He had a green Fargo van, and rearranged the letters of the name on the hood and the back door, to read “GO FAR.”

slope stake offsets), but he soon followed Richard to the City of Calgary (and was still there, Tom Martin told me by e-mail in 2005). Milton Carrasco<sup>58</sup> was there when I came and was fairly green, from Uganda (of Indian extraction, through Southampton University); Mario Stamm was a Jewish draftsman from Chile whose family had escaped when the socialist president Allende came to power. Bernie Smira, P.Eng., of eastern European extraction and training (whom I knew from ITE Section meetings) was in the Municipal Department long before I went there; he left for Stanley Associates after I had been let go. With the recession of 1983 (when Stanley staff in Calgary supposedly dropped from 160 to 70 in one single month), he lost his job and had a hard time, like many others. With his teenage daughter, Bernie later visited us in Yukon with a canoe strapped on top of his Renault. I assisted them by putting the canoe into the water in downtown Whitehorse, and by taking Bernie's car home and waiting for a phone call from Minto Landing to just go and pick them up (!!) a few days later. This resulted in a mid-summer late night return trip, and they stayed over with us before returning south. There was also a James Dean, P.Eng., who had come from Ontario; he left RCPL after about three months.

2019 GoogleMaps images obviously show repairs all along the Bow River in this area (due to the major flood from June 2013). But from Alberta Transportation come the data that of the whole length of Highway 2, the section directly south of 17 Avenue SE carried the highest traffic volumes of all, a whopping 146 110 vehicles per day, as the 2015 ASDT (Average Summer Daily Traffic) volume. The Design Year had been 1996!

The 1675mmØ concrete stormsewer crossed the (former) Deerfoot Trail SB to Peigan Trail EB off-ramp, and a huge berm was designed over it. This drains into the WID canal close to where Home Oil was. At the time, this 66" diameter pipe, (for non-metric readers) was the very largest flat bottomed round reinforced concrete pipe made in Calgary, at Class V – according to the classification from Iowa State University, based on all the research and studies done there over many decades. All these requirements and standards were new to me at the time. When landscape architects raised the berm, hay bales sealed by plastic bags were designed, because the Iowa formula did not extend to the higher cover over this stormsewer. Strange, but the recent realignment of the Peigan Trail WB to Deerfoot Trail SB on-ramp (described above) may well have solved (or avoided?) a huge future maintenance problem – because eventually, hay also deteriorates; does it collapse? In hindsight, we could have specified Styrofoam, which had very recently been developed in Norway for overpass embankments, and I had read about while working at the NITRR in Pretoria in 1977.

The K-type catchbasins for Deerfoot Trail have horizontal and vertical inlets, so that e.g, plastic or other debris (fertilizer bags) could not clog up the catchbasin as easily as it could clog up a horizontal grate. This was the City's standard, inlets in swales had a specific feature to affect this. Contract 7a did not have many storm-sewers, and for some of them, the catchbasins had been eliminated, but they would be installed for the stretch of Contract 7b. Drawings for all the storm outlets into the Bow River had to be "double sealed", and as I had yet to be registered in 1978 as a P.Eng.,<sup>59</sup> Avtar Gahunia and Bob Aitken (for the **firm** RCPL) did this, together with a rectangular stamp for RCPL as **business**. (This business sealing is only recently being required in British Columbia.) My involvement with Contract 7b (which had its south project limit at the excavation at 34 Avenue SE, was therefore more substantial. Unfortunately, I do not possess a set of its drawings.

Directly west of this area are the two Deerfoot Trail bridges crossing the Bow River, now called the **Calf Robe Bridge**. Each of these consisted of four "steel bathtub design" sections, on top of which the on-site decks – with concrete barriers on both side – would be cast. Surface drainage of these bridges became my responsibili-

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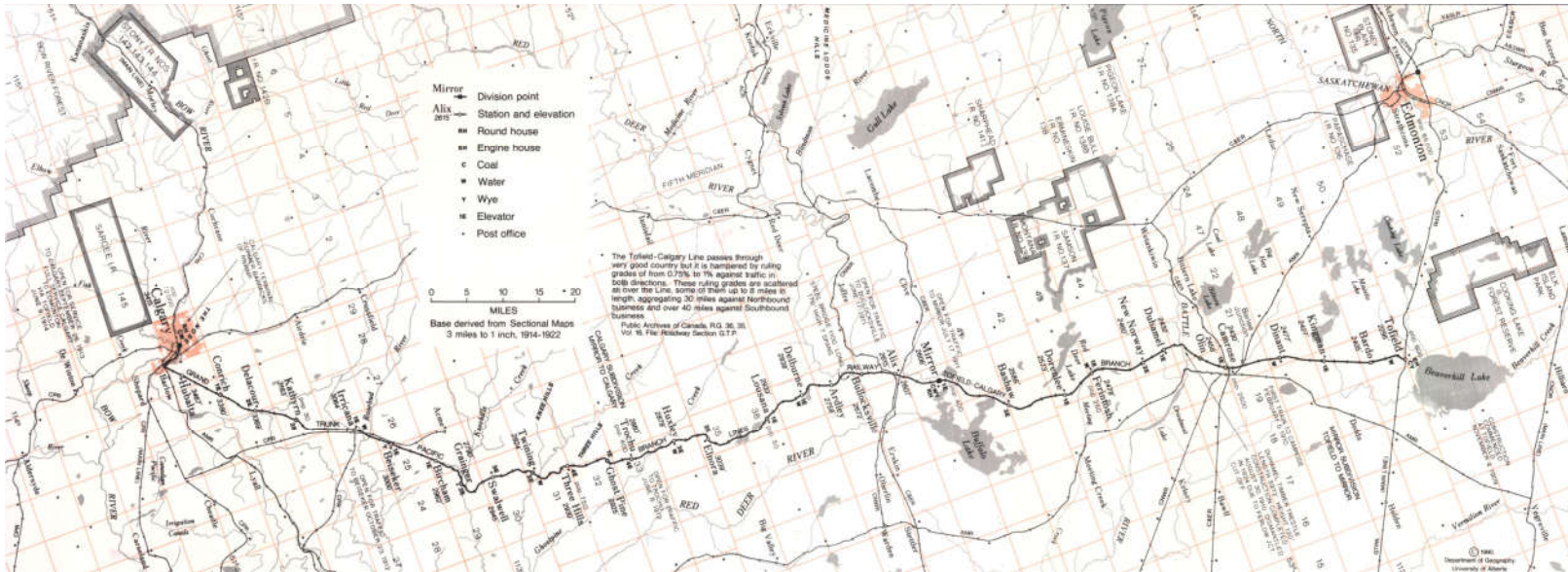
<sup>58</sup> Milton later went to British Columbia and became one of the two founders of Transoft Solutions Inc. in Richmond.

<sup>59</sup> I applied to APEGGA soon after arrival, and the process took its normal time. When asked, I bluntly declined to sit for a "TOEFL test" by arguing that my Afrikaans training had preceded 12 years of bilingual engineering practice, in a country where English was surely not a **foreign language**. They agreed, and my registration came through in October 1978 (if memory does not fail me on this detail). I likely signed (and sealed) the design drawings for Contract 7b.

ty, and this was some challenge because spirals of horizontal curves on both sides of the bridges meant that specific drainage locations had to be found. Moreover, I had to check for possible low points on the decks. Vertical downdrains were allowed, where water would drop straight into the Bow River. These structures were designed “in-house”, and not through a sub-consultant. I liaised well with Barry Biswanger, P.Eng., the engineer in the cubicle next to me, after I had lost my original office; he was supervised by Mike Strong. As mentioned before, one of the two bridges (= was it the current EB one?) was designed for the anticipated heavy earthmoving equipment.



GoogleMaps image showing the bottom middle end of the Deerfoot Trail Freeway Project of 1977/79.

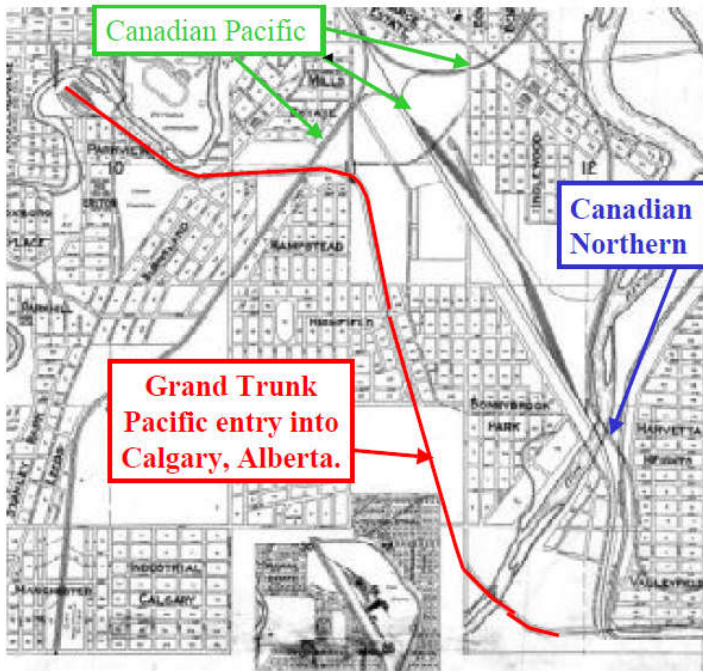


West of the Bow River bridge embankment started the long level stretch of Deerfoot Trail, within the flood plain of the Bow River, according to the Montreal Engineering report. We were well aware that this highway

was within the 1:50 year floodplain. The CNR overpass bridge in this area was interesting, as I had to design a road link under the north span of this new steel structure, for 46 Avenue SE / 15 Street SE. This rail link had not been built as a CNR line, but as the **Grand Trunk Pacific Branch Lines Company's Tofield-Calgary Line**, before Canadian National Railways was formed as a federal crown corporation and took it over. This single track (from the CNR passenger terminal close to 17 Avenue SW) ran on an embankment over the Bow River, and over a narrow timber 15 Street SE underpass. On the **previous page** is a Map of the Grand Trunk Pacific Branch Lines Company, Tofield-Calgary Line; with Calgary at left. (from the Alberta Archive, I think.)



Looking west on 15 Street SE to the CNR overpass.

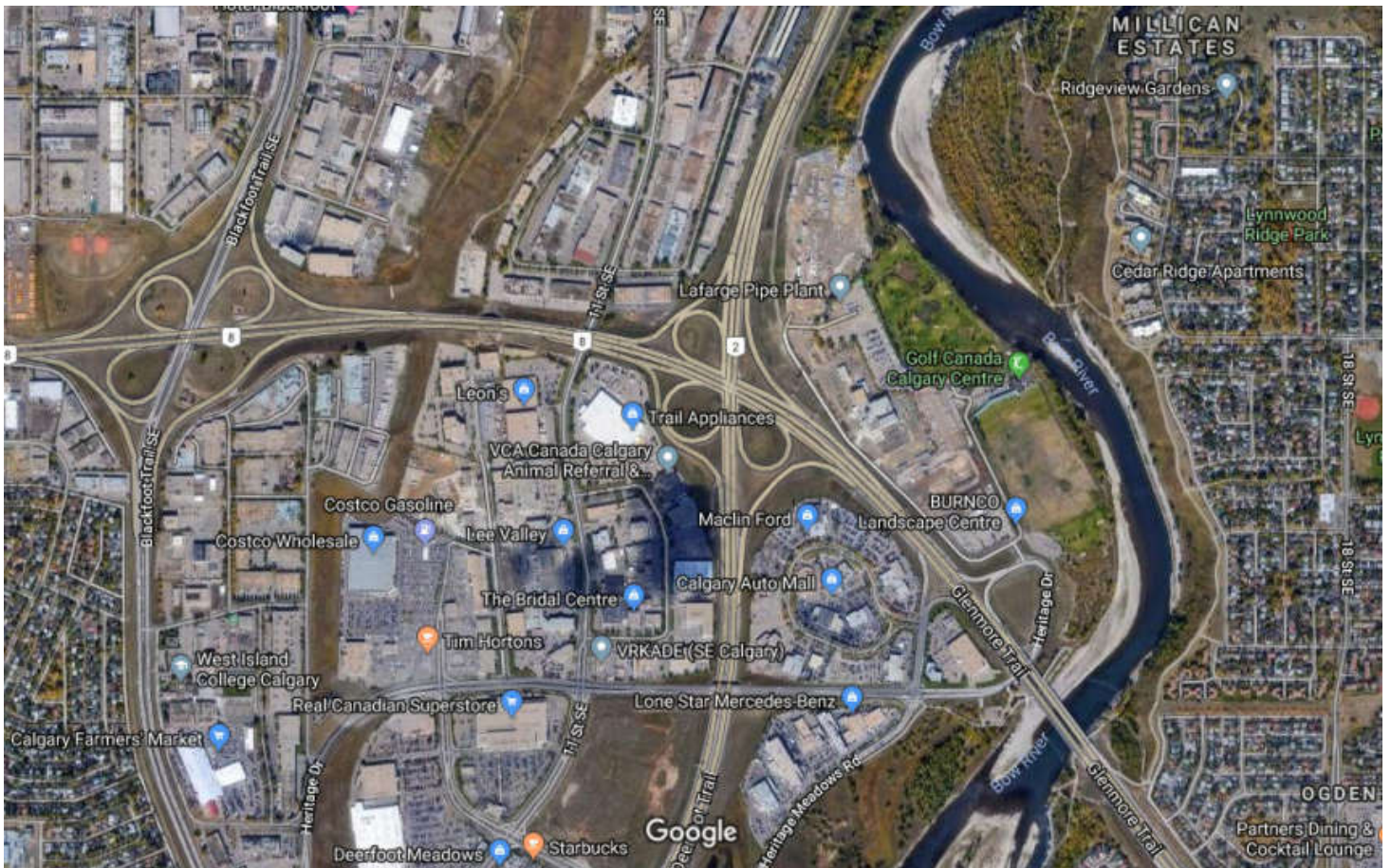


A point directly west of this road underpass had formerly been the “north end” of Heritage Drive SE, which had passed by a substantial scrap yard (Mohawk Metals) and then through an existing underpass of Glenmore Trail and from there to two rail served Cominco elevators.<sup>60</sup> From that point it turned right and ran west up the hill to directly south of the RCPL office. It then crossed Blackfoot Trail as a major arterial road. This “Heritage Drive” was mostly abandoned with the construction of Deerfoot Trail; Mohawk Metals is now accessed from the “**River-view Industrial Park**”. In July 1980, I dropped off our 1964 Dodge Polara (with a 318 cub. in. 8-cyl. V8 engine and push button automatic transmission) there, receiving \$ 64 cash for it. Twenty-one months earlier, I had purchased that car for \$ 75 from Mr. Pete Mol, just before he moved with his family to Agassiz BC, and did not dare take it due to BC’s vehicle inspections. The trunk was rusted out,<sup>61</sup> but the car was trouble free for us for 21 months, until it needed a “valve job”, and Roy McCullough, our mechanic neighbour in Lakeview, who serviced the RCMP’s all-cruiser fleet, suggested not to do it. We then purchased a red 1978 AMC Matador wagon, and a purple 1977 AMC Gremlin. So we had 3 American Motors vehicles, maybe an oddity/stupidity in Calgary!

◀ Map of the southeast part of Calgary, 1929, around the CPR Ogden Yard. The Stampede Ground is also clearly shown. The railway extension to the CNR passenger terminal was probably not yet built at that time I remember that building, but presume that it was no longer in use for the Budd cars from Edmonton.

<sup>60</sup> This was the “East Fairview Industrial Park” development. I understood from WW that this “old railway right-of-way” had actually originally continued much further, even going to Fort McLeod. (Was there any track there?)

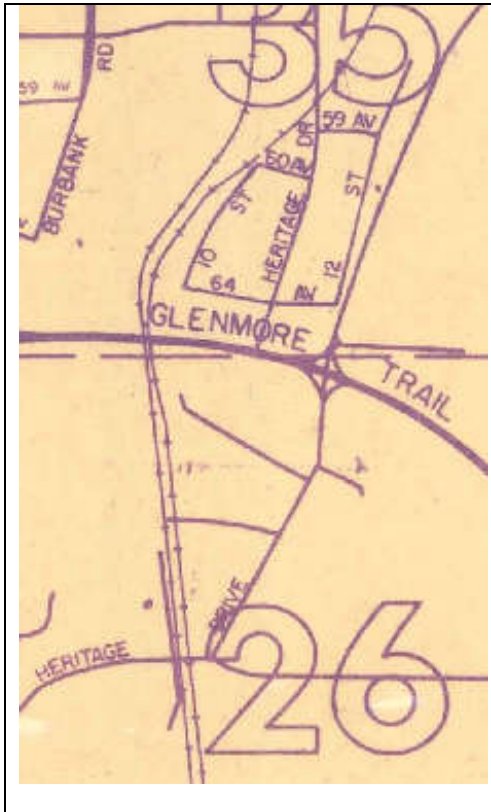
<sup>61</sup> Pete, the chief horticulturalist at Spy Hill Jail’s greenhouses, (who had a house on the jail site) had regularly thrown waste in the trunk from all his Saturday garden clean-up jobs. In September 1978, I assisted him for two Saturdays of paid work, one of them toppling a huge tree in the backyard of a property in the Mount Royal neighbourhood, and the next Saturday a fall clean-up in various residential gardens in the Spruce Cliff neighbourhood. We purchased many used things from Pete and Alice when they left Calgary and leased a nursery near Agassiz for a year; they returned to Calgary when the lease was up, somewhat dissatisfied with the wet weather.



This GoogleMaps image shows the very North end of the Deerfoot Trail Freeway Project of 1977/79.

The formerly signalized intersection of Glenmore Trail and Heritage Drive SE can be seen in the annotated aerial photo (at left, page 40) from EBA Engineering Consultants Ltd.'s report that was dated 1978/06/21 (on aerial photography from an unknown date), and showed a manure thickness of 40 inches at one spot. Deerfoot Trail freeway changed that completely. East of the (old) Heritage Drive had been one of **Burns' feedlots** for many years, and this area was also to be developed as the "**Glendeer Business Park**".<sup>62</sup> Rien Scheffer's firm had already reported on it, but I do not recall if this was a "traffic impact study" or a "planning study" supporting a layout that presumed (a) a right-in/right-out access off Glenmore Trail, (b) an all-directional access off Heritage Drive SE; (c) Heritage Drive SE to continue east under the Graves Bridge over the Bow River, with on-ramps (EB and WB) on the north side of Glenmore Trail. Work on that development started just before I left RCPL; this became a warehouse area, with e.g, a Sears Appliances Outlet Store, but is currently the "Calgary Auto Mall". The area north of Glenmore Trail, east of Deerfoot Trail, was already Burns' large concrete pipe plant (but now shown as LaFarge Pipe Plant on Googlemaps imaging.) I did a lot of work on the East Fairview Industrial Park during the first half of 1979, when working in the Municipal Division. Cominco also had a hand in it, due to the abandonment of the elevator site that had served their former fertilizer factory south of Heritage Drive SE. And finally, the realigned Heritage Drive SE would have an overpass over Deerfoot Trail. That would be at the (temporary) south end of the project. The embankment for that structure all had to be hauled from "Motorcycle Hill", a hill west of Blackfoot Trail that was already used for all kinds of sports and

<sup>62</sup> This was within the lands described as N½, Sec.26, Twp.23, Range 1, W5M, by "Burnco and City of Calgary". Originally, it had been called "Fairview Industrial", as shown in the "Minutes of a Post-Circulation Meeting held dated 18 July 1979", and was attended by me and WW, plus six City employees of various Departments.



fun (which were fairly new at the time), and it was obvious that after flattening of that terrain, it could also be used for all kinds of commercial or industrial development. That barren hillside of otherwise “useless” land was most likely also owned by the Burnco or the Burns Land organization (or one of its subsidiaries) like Jecco Developments.

At left is another view of the pre-existing road system at the bottom of Heritage Drive SE, showing the (traffic signalized) intersection of Heritage Drive with Glenmore Trail. This is copied from the “**Potential Heritage Reservation Sites (Jan. 1977)**” map of the City of Calgary Planning Department, with a “Note: Revised Oct. 1976.” The stub road north off 12 Street SE became the road access to Mohawk Metals, and there were two railway tracks to Cominco. The Map also shows the road stub(s) at Cominco’s elevator, as well the 11 Street underpass of Glenmore Trail (See labelled “Drive” for **Heritage Drive**) and East Fairview Industrial Park that I worked on.

It is to be regretted that I did not realize that in 2005, I had Set No. 3 of the (yellow) book of drawings that was part of the Tender Document for Contract 7a, because I could have referred to it then. It was packed in a cardboard box in our garage at 10398 W. Amelia Avenue, Avondale Arizona, USA, and I only found it when we moved back to Canada after

expiry of my sixth TN visa, and when I had declined accepting ADOT’s seventh “letter of support” which would have kept us 12 months longer in the U. S. of A. And in late 2018, I found it again, though I had to search for it in early 2019.

Perusing Books 1 and 2 of 2 for **Contract 7a** – Project No. 20569 indicates that my name shows up on only a few of the drawings (as if I had actually checked them!) but that the project did not include the on-ramp where the crash occurred in 2001. Dwg. T3-13 (Roadway Layouts) was included in the Tender Documents “**For Information Only**” because the limits of construction for **Contract 7a** ended around Deerfoot Trail Sta. 3 + 500 (from Dwg. TR1-3 (Roadworks.)) The earthworks further south must have been in **Contract 7b**, and it would have been logical to reissue Dwg. T3-13 for that – on which the same **DES – C.D.K, DWN – J.A.F. and CKD – J.D.R.** had already been stenciled in early 1978. For that Contract 7a, this drawing was shown as “**REV. 1 – ISSUED FOR TENDER – BY CDK, APPD. IJW**”. Ian Williams was no longer with RCPL when Contract 7b was issued for tender. For Contract 7a, I actually only designed Dwg, T1-15, T1-16 and T1-17,<sup>63</sup> and these show **MAY 1978 - ISSUED ADDENDUM No. 2 – BY J.D.R., APPD. I.J.W.**” The whole thing is so absolutely strange, and the question arises (2019):

### **Why wasn’t Ian Williams questioned, who had approved the “Rev. 1, Issued for Tender” drawings?**

The logical reason for this question is that **he was still available in 2005**, (at Stanley / Stantec in Victoria). The horizontal alignment had already been “approved” before the detail design had started, and Ian would also have said that. He must have had more information than me, of all the things that occurred in the fall of 1977.

The more ponder about it, the more I think that I was somehow set up to become at “**scape goat**”, and that the efforts to do this, failed. In about half a century’s time, someone may read the “Agreement”, and then agree!

<sup>63</sup> Design of minor gravel roads: 46 – 49 Avenue SE, east of Barlow Trail SE, and 51 Avenue SE to the City Yard.

## SIMPLIFICATION OF PROCEDURE

## THE CALF PATH

The need for simplification may be illustrated by the following cautionary tale.

One day through the primeval wood  
A calf walked home as good calves should;  
But made a trail all bent askew,  
A crooked trail as all calves do,  
Since then three hundred years have fled,  
And I infer the calf is dead.

But still he left behind his trail,  
And thereby hangs my moral tale.  
The trail was taken up next day  
By a lone dog that passed that way;  
And then a wise bell-wether sheep  
Pursued the trail o'er vale and steep,  
And drew the flock behind him, too,  
As good bell-wethers always do.  
And from that day, o'er hill and glade,  
Through those old woods a path was made.

And many men wound in and out,  
And dodged and turned and bent about,  
And uttered words of righteous wrath  
Because 'twas such a crooked path;  
But still they followed—do not laugh—  
The first migrations of that calf,  
And through this winding wood-way stalked  
Because he wobbled when he walked.  
This forest path became a lane  
That bent and turned and turned again;  
This crooked lane became a road,  
Where many a poor horse with his load

1

Toiled on beneath the burning sun,  
And travelled some three miles in one.  
And thus a century and a half  
They trod the footsteps of that calf.

The years passed on in swift fleet,  
The road became a village street;  
And this before men were aware,  
A city's crowded thoroughfare.  
And soon the central street was this  
Of a renowned metropolis;  
And men two centuries and a half  
Trod in the footsteps of that calf.

Each day a hundred thousand rout  
Followed this zigzag calf about  
And o'er crooked journey went  
The traffic of a continent.  
A hundred thousand men were led  
By one calf near three centuries dead.  
They followed still his crooked way,  
And lost one hundred years a day;  
For thus such reverence is lent  
To well-established precedent.

A moral lesson this might teach  
Were I ordained and called to preach;  
For men are prone to go it blind  
Along the Calf-path of the mind,  
And work away from sun to sun  
To do what other men have done.  
They follow in the beaten track,  
And out and in, and forth and back,  
And still their devious course pursue,  
To keep the path that others do,  
They keep the path a sacred groove,  
Along which all their lives they move;  
But how the wise old wood-gods laugh,  
Who saw the first primeval calf.  
Ah, many things this tale might teach—  
But I am not ordained to preach.

SIR WALTER POSE—1895

This beautiful poem appears in the textbook that I had used in 1972 in one of my MBA courses. “Applications of O. & M”, (ed. G.E. Milward, for the Organisation & Methods Training Council, Macdonald and Evans Ltd., 1964.) While it is not

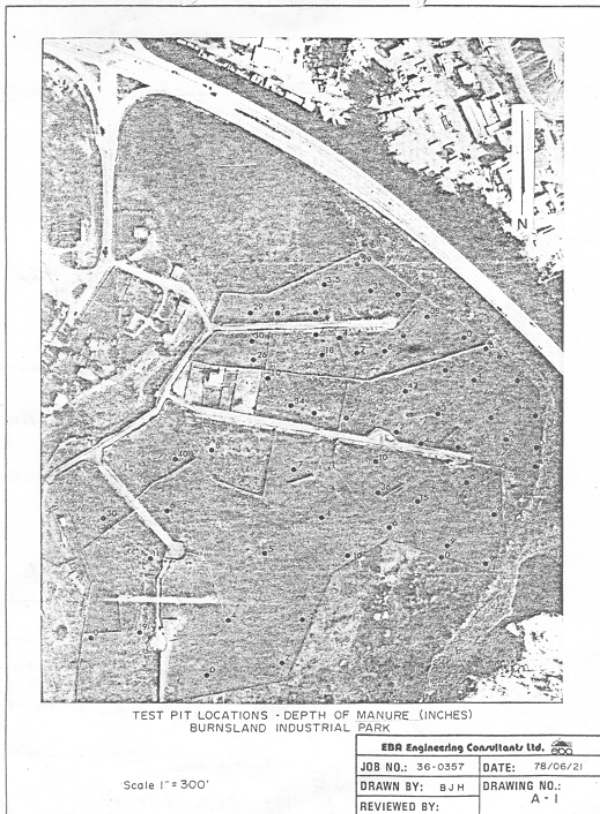
a transportation engineering textbook by any means, the **last two stanzas** could be seen as excellent advice. I could not resist including it while discussing my (minor) role in **Deerfoot Trail**, a project that even has a **Calf Robe Bridge**. **But**, as I have often tried to remind myself, I am not really **ordained to preach** on transportation engineering issues and other very interesting things. Perhaps I only state things from my own perspective. It is for you, dear reader, to discern if my comments and my perspective are **somewhat** correct and / or valid.

Looking closely at the “Notice to Tenderers” **on the next page**, a few things need to be mentioned and clarified:

- The contract included 45,000 tonnes and 65,000 square metres of Asphaltic Concrete, but this was not the “final road elevation”; it assumed a final unreinforced concrete wearing course on the freeway, which was to be separately tendered and constructed.<sup>64</sup>

<sup>64</sup> This design was uncommon for Calgary at the time, and it was probably an Alberta Transportation requirement.

- The single “post-tensioned precast concrete two-span bridge” is the 17 Avenue SE Bridge widening.
- The wording on some of the items is quite vague, and perhaps intentionally so.
- The 17 Avenue SE interchange completion was necessary first, and the watermain installation on 17 Avenue SE had to be completed before that. These drawings were not with the tender drawings.....
- The south limit of Contract 7a is at Barlow Trail SE.
- Drawings for minor roadwork near Barlow Trail SE and 50 Avenue SE had not been prepared yet.



Burns' former Feed Lot site.

Contract number 7a was advertised in the Calgary Herald of 18 May 1978 (see at right) with a closing date of 8 June 1978.

After tenders had closed and the City had awarded the contract to **Chilko Construction Ltd.**, we had an important 20-person project meeting in the RCPL Board room, where all kinds of scheduling issues were discussed in detail. (That was when I noted that half of the men there were immigrants, and only two were Alberta born.)

Much of the land south of the (current) Calf Robe Bridge was very flat. Final pavement level crossfall was set at 1:60, which was on the low end of the spectrum that normally sets that design parameter at 1:50. Final grade had been “struck” above the existing ground elevation, and sideslopes were all embankment slopes in this area.

## NOTICE TO TENDERERS

**CONTRACT FOR:**  
**Deerfoot Trail - 17 Avenue to Glenmore Trail -  
 17 Avenue Interchange and Barlow Trail**

**THE WORK CONSISTS OF:**  
 Approximately 88,000 cu.m. of common excavation  
 Approximately 10,000 cu.m. of waste excavation  
 Approximately 2,000 m of fencing  
 Approximately 5,000 m of storm sewers (various diameters)  
 Approximately 140 catch basins and manholes (various types)  
 Approximately 14,000 cu.m. of topsoil strip and stockpile  
 Approximately 45,000 tonnes of Type A - Asphaltic Concrete  
 Approximately 85,000 sq.m. of Type C Asphaltic Concrete  
 Approximately 15,000 lin.m. Curb and Gutter  
 Approximately 260 m of utility diversion (water and sewer)  
 Construction of one post-tensioned precast concrete two-span bridge.

**COMPLETION DATE:**  
 June 31, 1979 — The complete 17 Avenue interchange  
 November 30, 1979 — The complete work of the contract.

Tenders in sealed envelopes marked Tender No. 8149 will be received up to 2:00 p.m. Calgary time on June 8, 1978 for work described. Tenders shall be mailed or delivered to the director of Purchasing and Stores, The City of Calgary, 1120 - 10th Avenue S.W., P.O. Box 2100, Calgary, Alberta.

Interested bidders may obtain copies of tender documents, specifications, and drawings at the office of Reid, Crowther & Partners Limited, 7410 Blackfoot Trail, S.E., P.O. Box 5600, Station "A", Calgary, Alberta, on payment of \$100.00 by cash or certified cheque.

Copies of the following standard City specifications are included in the tender document by reference only. Bidders not already possessing such specifications may obtain them from the supervisor of Engineering Graphics, Rocky Mountain Plaza, Calgary, at the prices indicated.

Standard Specifications — Streets Construction — 1978 — \$7.50  
 Standard Specifications — Watermains and Services — 1978 — \$7.50  
 Standard Specifications — Sewers Construction — 1978 — \$7.50

To ensure consideration, all tenders shall be accompanied by both:

- a Bid Deposit by Bid Bond, Cash or Certified Cheque for 10% of the gross tender amount.
- a consent of Surety to furnish a Performance Bond for 50% of the gross tender amount, and a Labour and Material Payment Bond for 50% of the gross tender amount.

ENG-785  
*Alberta - 18th May 1978*

The contract number (7a) is not mentioned here, and there were two separate completion dates.



AASHTO's 1967 report *Highway Design and Operational Practices Related to Highway Safety* was the first official document that focused attention on the hazardous elements of roadside design and suggested appropriate treatment for many roadside elements (1). This guide, popularly known as the AASHTO "Yellow Book," was revised and updated in 1974 (2). In 1977, AASHTO's *Guide for Selecting, Designing, and Locating Traffic Barriers* (Barrier Guide) provided detailed guidance on the use and design of longitudinal traffic barriers (roadside barriers, median barriers, bridge railings) and crash cushions (3). This publication was instrumental in helping to attain the high degree of traffic barrier standardization that currently exists in the US. Finally, in 1988, AASHTO formally approved its *Roadside Design Guide* (4), a manual that incorporates much of the information contained in the 1974 Yellow Book and the 1977 Barrier Guide as well as additional research findings and state-of-the-art practices of several state highway agencies.

Copied from Chapter 13 of a book: titled "**The "Forgiving Roadside" design or roadside elements**", by R.D. Powers (FHWA), J.W. Hall, (Univ. of N.M.), L.E. Hall (Univ. of N.M.) and D.S. Turner (Univ. of Alabama).

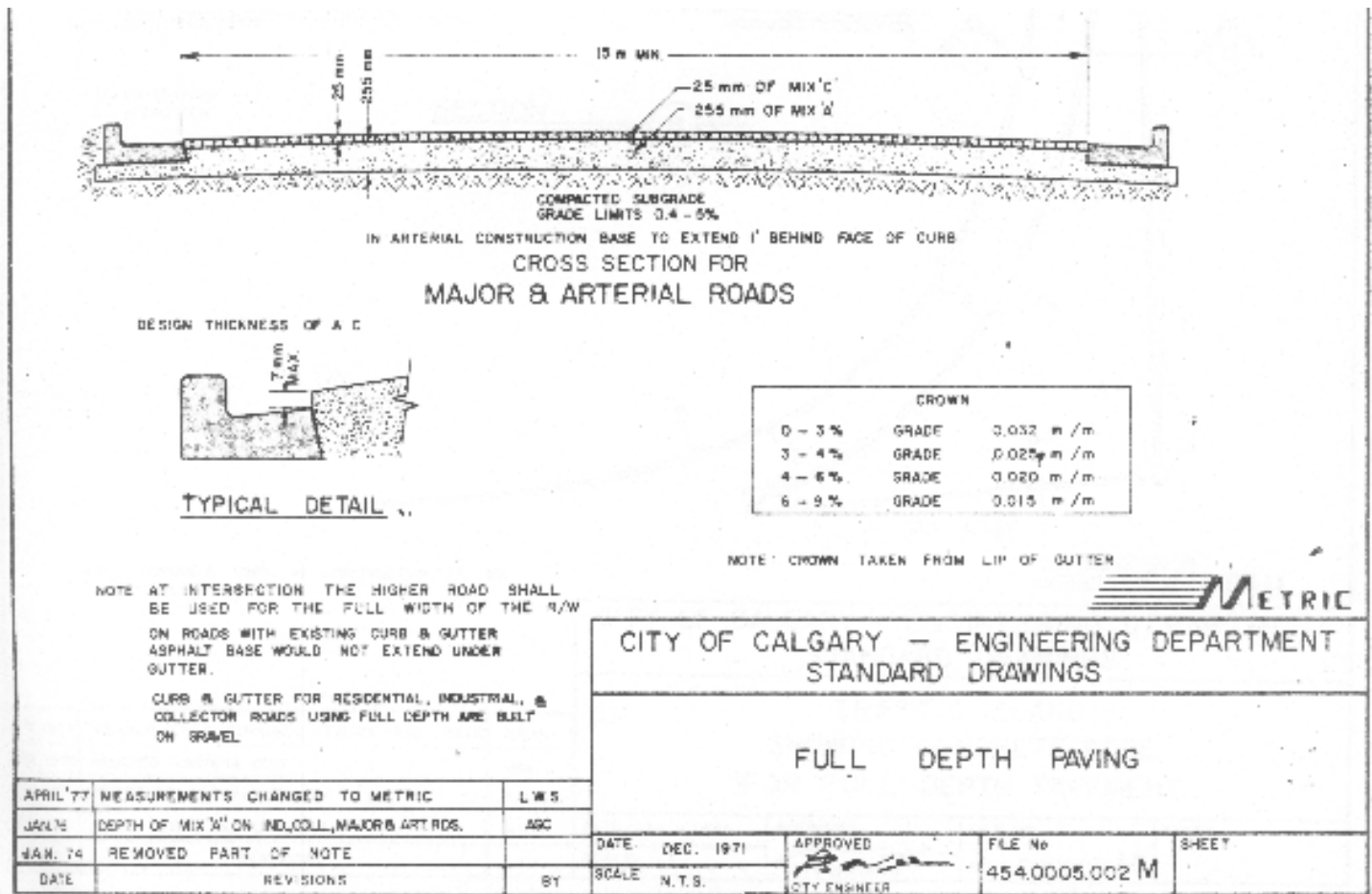
off-ramps had asphalt surfacing according to the City of Calgary standards (see next page for typical cross-sections) which I initially found strange – because they were so totally different from what I had been used to in South Africa, particularly with NITRR materials research. On the way to work from Bowness to the RCPL office on a daily basis, I had already seen multiple potholes on major and minor roads. When questioning why these existed, I was told that it was "the frost", and that this was "the way things were done" with dirt cheap asphalt. (What did I know about frost heave?) Directly behind our initial rental house at 7739 Bowcliffe Crescent NW was the Trans-Canada Highway, which had a reinforced concrete pavement, with joints that had supposedly been "designed" when the highway was paved. Joint were already known as problematic; we suffered from the noise of trucks of which the tires bumped over each and every one of those joints.

The design of the 750mmØ steel watermain crossing Deerfoot Trail directly south of the 17 Avenue SE interchange (as previously described in part) was also my responsibility, between Cushing Bridge to east of the crossing of the WID canal just east of the 17 Avenue SE Interchange. This pipe had to be imported from the USA, and I used that company's brochure for the design. Watermain design was somewhat new to me, but I was told not to worry because "shop drawings" would be prepared by the pipe supplier. I did not know the term at that time.<sup>65</sup> The pipe was steel with a very smooth cement mortar lining. The interior of the pump station building had to be heated, and I had to liaise with the City staff on the approval of this utility. GoogleMaps imaging shows the Bow Waters Rowing Club in that area, and yes, there was already a boat launch there in 1978. I once went inside that pump station with a city employee.

My design work on all the concrete safety barriers along the limits of Contracts 7a and 7b must not be overlooked. This was Alberta's very first use of AASHTO's brand new "little yellow book" (quoted as (3) at left) in Calgary, and an "F-shape" (almost identical to that of a New Jersey profile) was to be used, for both freeway sides (with flaring end conditions) and the full median, tying in to all structure columns. Street light pole bases had to be designed inside the median barrier, and in turn, the wiring to all these pole bases had to be liaised closely with Calgary Electric. This design work had not been completed when Contract 7a was awarded, because the work could obviously only be done while pouring the barriers and after the concrete wearing course had been completed.

The unreinforced concrete wearing course on Deerfoot Trail (to be supplied and placed in a separate contract) was to be cut (= grooved) at an off-set angle of 11 degrees, with varying longitudinal separations. The purpose of this was to avoid possible harmonic vehicle vibrations, but the grooves were shallow. On- and

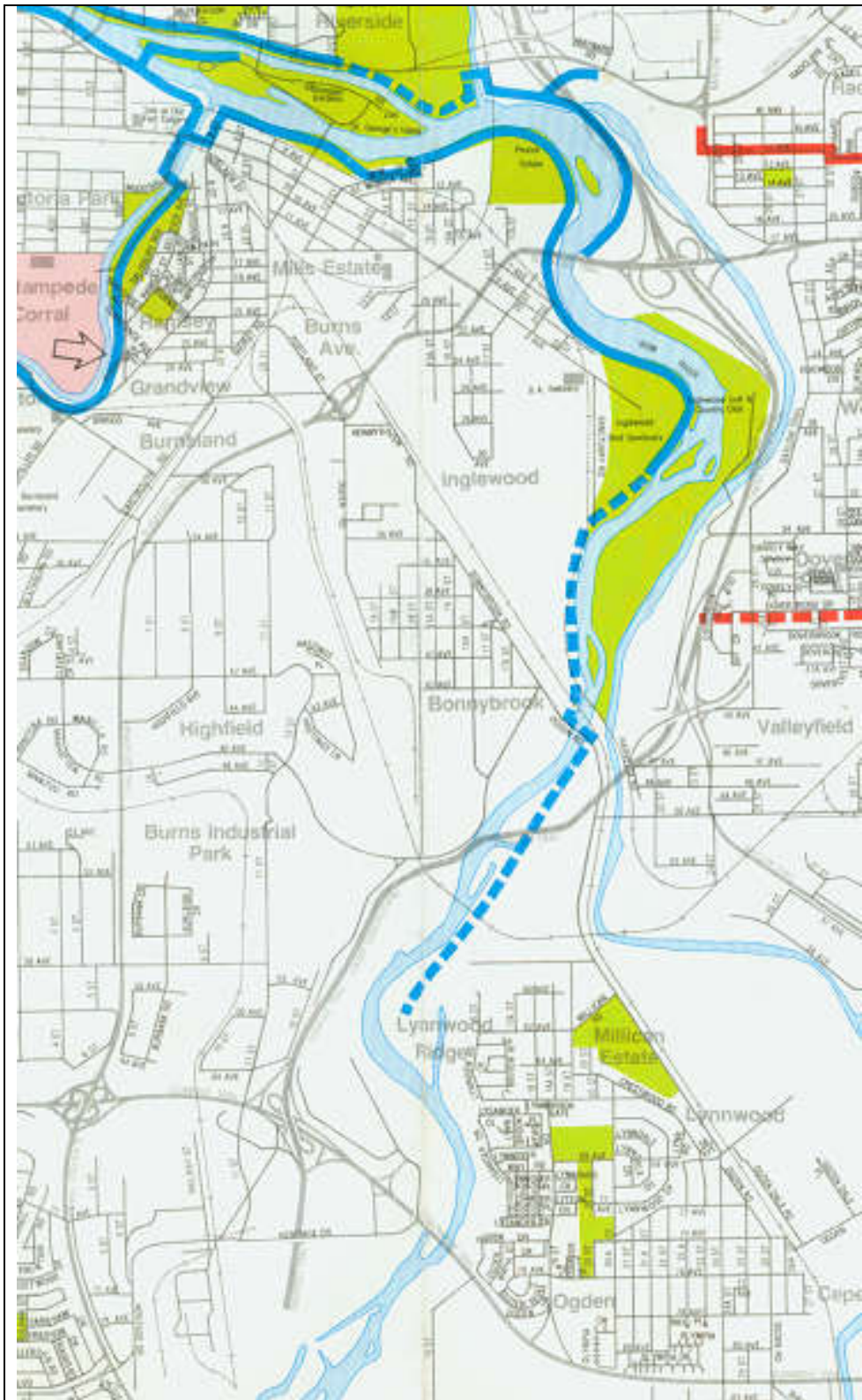
<sup>65</sup> Just over my cubicle's partition, I heard that the structural guys were amazed when Tom Martin's design drawings came in, and the remark was made that "no shop drawings are needed". South African practice had included these in designs.



I did not actually supervise the construction under Contracts 7a and 7b, as might have been assumed from my title “Resident Engineer”. Very soon, I became the **liaison person** between the Transportation and Municipal Divisions. I remember assisting the survey crew in setting out initial excavation slope stakes for a few days; it was in September 1978 and cold already. A Mr. Gerry Kleinhout had been hired as rodman. He lived in a construction trailer and was of Dutch extraction, soon also ending up in the Municipal Division. When he was laid off in 1980, being 46 years old and “unemployable”, he rented an apartment in an old brick building on the corner of Kensington Avenue and 10 Street NW, opening a photography studio in a store front downstairs.<sup>66</sup> We had our first Canadian passport photos made by him. RCPL hired Gaston Ouellette to assist Peter Jenkin and Larry Carleton to supervise the contracts. The July 1979 Staff list shows all three of them at the Deerfoot Trail Main Field Office, at a time when the single remaining house just north of 50 Avenue SE had already been demolished. I attended some site meetings there; I believe Peter, Larry and / or Gaston were allowed to live there. I scratched out the name “Larry Carleton” on the list; he may have just left at that time. I do not recognize the name Garry Iannattone (at a “Deerfoot Bridge CP/CN office”) or Bill Zacharias (at a “Deerfoot Trail South Field Office”). I was then obviously no longer involved with supervision, I rarely handled revisions on design drawings that were issued by “Addendum” or “Bulletin” to the Contractor – with copies sent to all parties.

The Map **at left on the next page** is a part of the City of Calgary Cycle Route Map, 1979. It shows the pre-existing road system and well as Deerfoot Trail in grey, marked (*very lightly*) as **under construction**. This map seems to be very significant, because it indicates both the “existing” and “proposed” roads. A year or so **earlier**, these new roads would not have been shown, while a few years **later**, all the old roads would obviously have been deleted. The pie-in-the-sky proposal of Peigan Trail (with a link to Barlow Trail) is also shown....

<sup>66</sup> Al Swanson later had his office (as Swanson Transportation Engineering Consultants) in that building.



Part of the City of Calgary Cycle Route Map, 1979.

Calgary was also quite progressive in the construction of its bike-ways – the ones in **solid red** existed in 1979 and those in **dashed red** were to be completed in 1979. Similarly for the pathways, in **solid blue** and **dashed blue** lines.

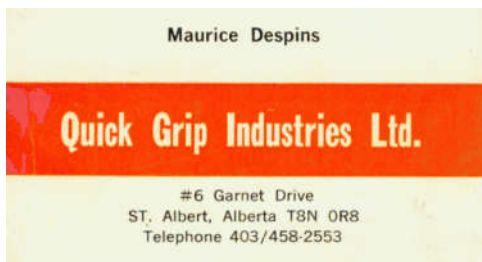
A weird construction situation that I recall was **either** a (minor) Contractor error, or my (minor) omission on the drawings for Contract 7b. It could have become catastrophic (**but did not**). One day, a man entered the office with a terrible smell on his dark grey overall. He trod right by everybody's cubicles, straight to Ed Tahmazian's office. What had happened? While "clearing and grubbing" on the west side of Deerfoot Trail, just north of the scrap yard, the earthworks Contractor's grader operator had exposed (but not hit) the **APPLE Condensate pipeline**, one that ran along the east right-of-way limits of the (old) Heritage Drive SE and zig-zagged in and out of the "project site". All work had suddenly stopped; this pipeline inspector came to inquire why this pipeline was not been shown on the particular drawing (meaning U3-12 or something like that). Ed and I immediately drove to the site, where a group of people had already gathered, (**but not the fire department or the media!**) It was discovered that the grader operator had been a bit too zealous by "clearing" **too wide a swath** – meaning outside the slope stakes that had been clearly marked – and that the real pipeline was (at that point) just outside limits for clear-

ing and grubbing. But yes, it could have been shown (as the only existing utility, though outside the construction limits) on this Drawing U3-12. We had just left it out because it hadn't made sense to produce a virtually blank drawing, and then make a reduction of it and multiple prints of both.



South end of the concrete stormsewer.

The photo at left shows the very south end of the storm-sewer, at an east-west chain link fence being the south limit of Burns' feedlot and the realigned Heritage Drive SE. Stormwater was to run into grassland and a slough of the Bow River, now the Heritage Meadows Drive area. When I did some preliminary design work on Deerfoot Trail extension, Ed and Clarence were continually busy with all kinds of major (or even minor) design changes to the interchanges with Southland Drive and Anderson Road. Had these preliminary designs perhaps been "problematic" at first, (for lack of a better word), or was there some unknown political wrangling, namely to move Deerfoot Trail in its entirety to somewhere east of the Bow River?<sup>67</sup>



◀ During my flight west in April/May 1977, I had met a gentleman from St. Albert who owned a home-based business, manufacturing the nail-studded strips used for installing carpets, with a machine in a shop on his property and the use of part-time high school students. He brought me into contact with newly arrived immigrants from South Africa, and we used some of their tips before our emigration. We realized that every case is different, and once returned to see him when visiting my aunt in Edmonton

who also visited us occasionally. At that occasion, just before the 1978 Commonwealth Games, I received a speeding ticket while driving south (meaning uphill) from the North Saskatchewan River bridge. That same summer of 1978, Lydia's parents came to visit us for the first time. In June 1978, we bought a (3<sup>rd</sup>-hand) soft-top tent trailer, which I connected to the Hornet wagon with a Canadian Tire purchased hitch, and we started our (free) weekend camping trips along the north leg of the Forestry Trunk Road, at places like North Ghost.

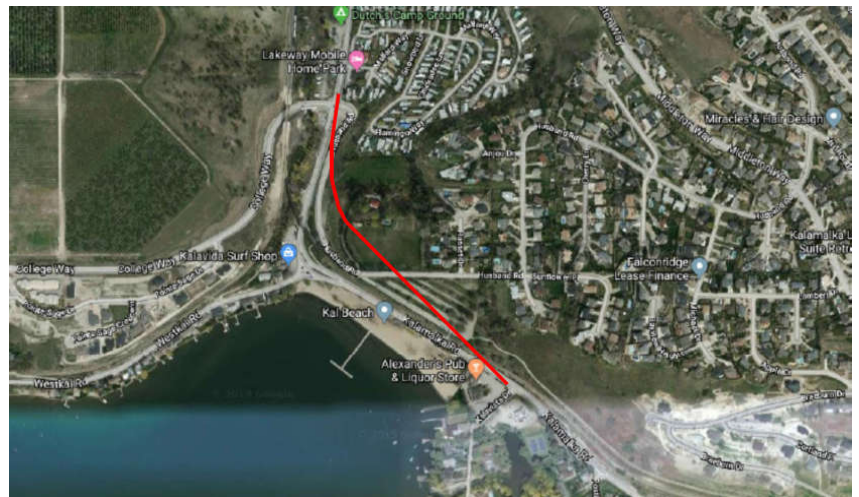
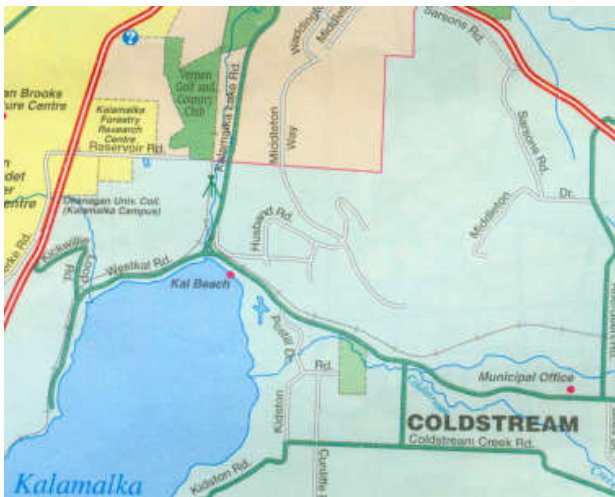
When my involvement with the design of Contracts 7a and 7b had been somewhat completed, I received an interesting assignment: A preliminary design study, on behalf of the North Vancouver RCPL office, for a municipality in British Columbia. RCPL had (recently?) taken over a firm called Okanagan Planning and Engineering Consultants Ltd. (= OPEC<sup>68</sup> for short) and this firm had been retained by the **District of Coldstream**, directly southeast of the City of Vernon. The idea was to improve Kal Beach, located at the very north end of Kalamalka Lake. This could be done, it was thought, by building a very skew bridge on the **east leg** of Kalamalka Lake Road, overpassing an existing railway line and connecting it to the **north leg** of Kalamalka Lake Road that lead to Vernon. This overpass would open up the narrow and restricted beach area itself, and would enable the construction of "on-site" parking lots. Another obvious advantage would be the elimination of an old timber railway trestle bridge at the west end of Kal Beach. At that time, I was still completely unaware of the explosive situation that the phrase "railway abandonment" normally ignited in Western Canada. I was told that the Vernon-Lumby CNR line would likely be abandoned soon, and that the Vernon-Kelowna CNR line would not take much longer to face a similar lot (or the other way round?). These two railway lines joined at the west end of Kal Beach, and both existing timber railway trestle bridges there were in poor shape. Westlake Road connected to Highway 97, while the east leg of Kalamalka Road joined Highway 6 toward Lumby. I was given a set of aerial photos on which could use my (former) interpretation skills. There was also a set of blue aerial

<sup>67</sup> An article titled "Deerfoot's Revenge" by Jeremy Klaszus (Swerve, 2013-03-15) who had an interview with Rod Sykes (former mayor) describes the political situation and why this freeway was located where it currently remains.

<sup>68</sup> Not to be confused with the Organization of Petroleum Exporting Countries, of course!

mapping prints of the area, with contours (and I believe they were at a scale of 1" = 200 or 400 ft.), most likely made by the Province of British Columbia (or that Regional District), of which I knew absolutely nothing at the time. But Lydia and I had already seen this north end of Kalamalka Lake in May of 1975, as passengers of a Greyhound bus that had started in Kamloops that morning and was to dislodge us late that evening in downtown Vancouver. We saw the blue water of Kalamalka Lake by peeking down from Highway 97.

So I drew up some alternative alignments for this Kal Beach bypass, with only very little project correspondence or verbal guidance from Ed Tahmazian. I met the person from the North Vancouver only once, and note that we did not have e-mail in 1978(!) But this did not deter me from developing a concept that would use (in fact, go virtually through) the area near "Husband Road", (which may well have been surveyed as a rural subdivision at the time, though I was unaware of it) where there was no single house or other sign of development in sight (on the aerial mapping, at least). I did this work with all the knowledge to my disposal and to the best of my abilities. I also wrote a draft report that explained the various alternatives, recommending one particular alignment. It all seemed quite logical to me. A few weeks later, **Mr. Norm Pearce, P.Eng.** from North Vancouver, revisited Calgary, sitting down with Ed and me and discussing the design concept, and he then took the whole bundle of paper with him, seemingly satisfied. And **I never heard anything more about it.** The idea was never pursued. (A few years ago, I phoned the District of Coldstream to confirm this.)



Kalamalka Lake (north) in the Okanagan, B.C.      Concept for road realignment<sup>69</sup> to improve Kal Beach access.


In September of 1978, I was requested to attend an RCPL paid evening course at SAIT, the Southern Alberta Institute of Technology, about road design and drafting standards. I did not complain about this, because the Canadian way of drafting and metrication was definitely different than the processes I had experienced in South Africa. So I went for 13 or 14 weekday evenings, and learnt what I had not known, particularly about spirals(!), sometimes even correcting the lecturer (which he actually appreciated), and mentoring classmates who were all draftsmen of some kind. One person whose name I remember was Bernie DiStefano, a draftsman from Calgary Electric. Eventually, I scored "top marks" in the final exam. An additional advantage of this was that in January 1979, SAIT did a transmission overhaul on our 1974 AMC Hornet Station wagon at the very minimum costs (= **parts only!**) which could not have been done by their workshop if I had been unaware of that helpful "student fringe benefit". In the spring of 1979, I enrolled for a course at the U of C, and passed it.

RCPL was the City of Calgary's main (or "lead") consultant (meaning "Project Manager") for this Deerfoot Trail project, but parts of the work had been handed out to structural consulting engineering firms in Calgary,

<sup>69</sup> From memory, the red line is the proposed road link – for the District of Coldstream – by OPEC/RCPL.

perhaps because RCPL could not have handled the large workload. I mentioned the names of some firms already, Kirkor Martin Hampshire and Speco Engineering Services. ACRES, Stanley Associates Engineering Limited, Underwood McLellan & Associates Ltd. and Associated Engineering Services Limited were also responsible (to RCPL) for specific bridge designs, but these were tendered and awarded as individual contracts. On the other hand, I knew that RCPL was designing one bridge for Calgary's first LRT project (the south line that started at the west end of 7 Avenue SW in downtown, and went as far south as Anderson Road). For that project, Underwood McLellan & Associates Ltd. was the City's Project Manager, but had sub-consultants among the firms names already mentioned (and others). RCPL's responsibility was for the Elbow River LRT Bridge, next to McLeod Trail, directly south of the Big Four Building on the Stampede Grounds. Mike Strong, a former City employee, was responsible for its design, together with Bob Wood, P.Eng. and Ted Hass, the Polish (and Polish trained) structural technologist / draftsman who worked in the cubicle next to me. All of them, obviously, reported to Bob Aitken. Krystyna, Ted's wife, worked in RCPL's mail room / print shop; they were the only married couple at work. She told me once that they were on the committee welcoming the "Polish pope" during his Canadian visit. While visiting Fort Simpson, NWT (driving from Fort Nelson to Fort Simpson in a single day), in June 1987, I learnt that all houses in that community near the confluence of the Liard River and the McKenzie River had been given a new coat of paint before that papal visit – at the cost of the Federal Government. I thought about them that late evening, on the way to the WACHO conference in Yellowknife.<sup>70</sup>

Copy to 20567-D

INTER-OFFICE MEMO	
TO: ASG Jacob	OFFICE
FROM: EAT	OFFICE
SUBJECT: Duct in Cominco	DATE: Feb 27, 79
MESSAGE:	
<p>I was instructed by Ed Dobson today that Cominco likes alternate 5 better. However we would not get a decision from them until March 12. So that we would be able to issue a bulletin quickly at that time we should proceed to have all 5 design and ready to go!</p> <p>Jacob, I have arranged for one print of all mapping of this area for this A.M. ASG.</p> <p>mapping dwgs 205 &amp; 206 inadequate. Requested extra mapping JALR 1979-02-28</p>	
DATE	SIGNED: 

71

My design on the streets and utilities for the industrial / commercial subdivision near Cominco's silos in the SW quadrant of the freeway interchange started in late 1978, and when the green building extension had been completed, I was asked to move into it, together with those of the Municipal Division who had first worked along the east wall of the red building. I remember Ed Tahmazian complaining about the City's (and/or Alberta Transportation's?) sluggishness to get on with the next phase of Deerfoot Trail – meaning to the Anderson Road Interchange) and saying “before long, we'll all be doing municipal work again.” So I wondered what had happened before, and what might happen in poor economic times, of which there was no indication (yet).

<sup>70</sup> On the first working day of 1979, I overheard Ted Hass and Mike Strong talking, and it appeared that something had gone terribly wrong: The LRT Elbow River Bridge (while under construction) had toppled into the water! Very shortly, discussions moved into Mike Strong's (and Bob Aitken's) office, and nothing more was heard about it. It dawned on me much later that the same type of bridge design as the CNR/WID/CPR/Ogden Road Bridge had been used – with one “bathtub” instead of four. But somehow, nobody had checked and realized that the centre of gravity for this narrow bridge would fall outside the footings, because the LRT Elbow River Bridge was on a curve.

<sup>71</sup> I obviously did not appreciate receiving this Memo – but responded to it, factually and truthfully. A report with five alternative concepts had actually been written by me, and the City obviously liked my Alternative 5 best. Note that I had already requested the extra mapping, without EAT's / ASG's knowledge, and had most likely advised Ed Dobson about it.

I had only had very little contact with those working directly under Mr. Walter Werenka, except my initial contact with Avtar Gahunia in December 1977, who was at that time spending all his off-work hours in the supervision of Calgary's very first Sikh temple. He had also designed it, we heard. One day, he came to work with many more swaddling clothes around his head than normal. He had somehow fallen off the temple roof, and we wondered amongst each other if this had been due to a poor design or to a poor decision to climb up. So I settled into this other cubicle at the back of the building, and kept on with planning and engineering functions.

This planning function also dealt with the lot layout, as the rear lot lines had to fit the Deerfoot Trail right-of-way and the large concrete stormsewer. The City's minimum radius for a street of this Industrial classification was **either** 80 metres **or** zero metres, (meaning a 90° turn with bulbs), and that's why the street layout was developed that way, immediately south of the current **Trails Appliances** store (which was a Staples store in the late 1990's). I prepared 5 layout concepts, and the rest of the story is shown **on the memo on the previous page**. This memo from Ed to Avtar shows how I was strangely being "side-tracked" in my career; by not giving me an opportunity to present my professional ideas, (to either Cominco or City staff) and by being placed directly under "supervision" of a colleague who did not even know what it was all about,<sup>72</sup> particularly that some additional sheets of aerial mapping were necessary for the design. Keating was the firm providing the aerial surveys, Dan Molesky was the legal surveyor who had to place all the legal monuments. He was one of Alberta's champion curlers at the time; Lydia and I had attended his firm's Christmas Party in December 1978.



Although an **RCPL business card** had by that time been printed for my use, I hardly spoke a word more to Ed Tahmazian than absolutely necessary. I was only rarely asked to do anything for the Transportation Department. I prepared a concept for a new road link between Ogden Road and 50 Avenue SE, to benefit the Imperial Oil tank farm. This was later (meaning: eventually) built with an overpass over Ogden Road, CPR and the WID canal. I was asked to ensure that there would be warning signs for Heritage Drive SE under Graves Bridge, and some concrete barriers next to the edge of the Bow River. For the

11 Street SE underpass of Glenmore Trail, the attainable design clearance of 14'6" did not need any warning signs. But even before being so rudely "side-tracked" to become a "drips and drabs engineer" (the pejorative term that is / was sometimes used for a "municipal engineer"), two things had happened:

(1) I had already felt somewhat slighted in the fall of 1978 about RCPL's "requirement" (wink-wink) that I take a course at SAIT, although I did not mention it at that time. But the firm's absolute silence (and not only financially) about my completion of a Graduate Course in **Highway and Airport Engineering** (under Dr. M. Sargious) at the U of C (in the Spring 1979 term) made me feel unwanted and unappreciated. To my knowledge, nobody else took or had taken any graduate courses; I was the only "unclassified student".

(2) During the winter of 1978/1979, RCPL organized a series of psychological aptitude tests for three employees: **Ian Williams**, (about 3 years my senior), **yours truly** and a brand new employee named **Harvey Olsen**, P.Eng., who had come to RCPL from supervising construction of the second CPR line near Lake Louise. He was a native Calgarian and a U of C graduate. It appeared that Ed Tahmazian wanted to see who could be of the greatest advantage to the firm, as having future "management potential". Well, if test results are true, (and I do not deny that they might have been indicative), these were very obvious: Pretty soon, Ian Williams left for

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<sup>72</sup> By this I mean both my urban planning as well as civil engineering skills.

greener pastures at Damas & Smith, (and from there to Stanley Associates), I was relegated to the green extension of the building, and Harvey Olsen, who had had no hand in the detail design of Deerfoot Trail, was to



March 1979, Bowness.

supervise construction of the very challenging Glenmore Causeway widening project (without having designed it) and much later on, signed as-built drawings for Contract 7a. He then climbed up the corporate ladder within RCPL, until he became Calgary Office Manager, during a time when both Ed and Clarence had been requested to relocate to RCPL's North Vancouver BC office. During that same difficult time in Alberta, Ian Williams was first sent by Stanley Associates to Kelowna BC<sup>73</sup>, and from there to Surrey BC (where I met him in his small office once, soon after I had started Grassroots Consulting Services in February 1993) and lastly to the Stanley Associates office in Victoria, BC. Who knows, Harvey Olsen may have been involved with the sell-off of RCPL to Earth Tech, (a green company?)

My half-a-year (plus) in the Municipal Division was a very difficult time. On the one hand, I had quite some support from many City of Calgary employees (in various sections), and I did get "job satisfaction" in designing a good industrial subdivision, which was likely built without snags. I had to design all the utilities (= watermains, sanitary sewers, stormsewers, streets with curb, gutter and sidewalks), and had to liaise with various City departments about electric servicing and streetlights, natural gas servicing, telephone servicing and Statutory Right-of-Ways for power poles, putting everything on drawings with the aid of draftsmen who did not really know their stenciling and line widths. Lavar Parker (who was the first Mormon I had ever seen) and Richard (Dick) Toole were the people to get the job done with, and I confess that I did not have enough "local expertise" for this, and to be an effective supervisor. Perhaps they (rather than I) should have attended the course at SAIT the previous fall, I often wondered. Other individuals like Bernie Smira (who researched the possible land development boundary on the long north side of Fish Creek Park)<sup>74</sup>, Dieter Foessel (who had a Master's Degree in Glaciology)<sup>75</sup>, and Dave Kneeshaw (who was an engineering student and went to Yukon for the summer of 1979 with a self-built camper on his pick-up truck)<sup>76</sup> were good colleagues. I also struck a good rapport with Ross McPhee, an urban planner, with whom I attended a few evening lectures at the brand new "Fort Calgary", about the planning work done by a Mr. Thomas Mawson in the 1910's. This person had strongly advised to his clients (the City of Regina and the City of Calgary) to "plant trees", and guess what: Only one of these two cities had followed his advice! I enjoyed those lectures, confirming the "City Beautiful" movement that I had heard about – confirming my ideas about urban planning as a complimentary discipline for a civil engineer.<sup>77</sup>

In early August, WW asked me (and not Avtar, who always wore a turban)<sup>78</sup> to accompany him to meet a com-

<sup>73</sup> Supposedly "in lieu of being laid off in Calgary", he (or Bernie Smira) later informed me.

<sup>74</sup> He also left RCPL for Stanley Associates during the first half of 1979, where he was laid off in 1983.

<sup>75</sup> He had taken courses "with the most exciting field trips" during his days at U of C, he said. After obtaining his B.Sc., he continued with a Master's degree in Glaciology, and then ... could not find any work, ending up at RCPL.

<sup>76</sup> While working in Yukon, a parcel arrived by mail with a **plumb bob**, sent by a Mr. Dave Kneeshaw P.Eng. from somewhere in Saskatchewan. He confessed in an accompanying letter that he had taken this article with him after his summer work in Yukon, in 1979. Hardly anybody at YTG recognized his name; I was the only one who had worked beside him.

<sup>77</sup> Urban planning in South Africa was (in my days) seen as a (somewhat redundant) but good sub-discipline of civil engineering and land surveying; in North America, it is much more seen as a sub-discipline of Architecture.

<sup>78</sup> I do not make this statement lightly. A lot of "rednecks" lived in Calgary at the time, even in high positions. I guess that as a visible "westerner", I might be considered more acceptable to the Stampede Board, in their own boardroom.





mittee of the **Calgary Stampede Board**. Perhaps it was my proven skill in storm drainage design that caused this. The issue was a possible land purchase of two rows of street blocks between 17 Avenue SE on the south and 13 Avenue SE on the north, and between McLeod Trail SE and the Elbow River (shown as the **yellow area at left**). This substantial swath of land would enable the construction of a future hockey rink (read: the current Saddledome and Round-up Centre). This concept presented one particularly important utility snag: An existing stormsewer running east along 17 Avenue SE had to be diverted north (including a “zig-zag” section on McLeod Trail) to 13 Avenue SE. Stormsewer dimensions at the start of the diversion was in the order of 1.20m x 1.20m in size (I seem to remember); design flows would all have to be checked, as recent urban

densification of the long 17 Avenue corridor had likely increased the necessary run-off coefficient over the years. The additional runoff from the Saddledome area and the proposed parking lots (with a 100% runoff coefficient) would need to be calculated, and a ball park cost figure was required. Quite a challenging project, I thought, but was it for me, in the long run? So I tried to consider changing jobs, speaking to a Mr. John Gill, P.Eng. about it. He promised to discuss this with his new boss, Mr. Al Swanson, and the situation looked good. For the fall term starting in September 1979, I enrolled in a second Graduate Course at the U of C: **“Hydraulics for Municipal Engineers”**. The lecturer was a Mr. Laurie Enns, P.Eng., from the same firm of John and Al: Underwood McLellan Ltd.!

But the real crunch came when I was asked to do something so much out of my “field of expertise” that I dared to “complain” to Mr. Walter Werenka. It was about subdividing an out-of-city parcel off Old Banff Coach Road, on the west side of Coach Hill, within the MD of Rockyview. A long existing water supply line for the subject parcel came directly from the Bow River, within a sleeve under the Trans-Canada Highway, and this lead to a small reservoir and an electric / electronic switch system for one estate. Subdividing the property into two parcels would need proof of providing water to a second home site from that existing set-up. I drove to the site with one of the firm’s technologists (whose name I forget), and we stood there and tried to figure out how one could make the system work so that each house owner would be able to regulate the pump system, completely independently of the other. We both thought that it could not be done as easily as it seemed, and I mentioned this to Mr. Werenka. He countered by saying that it only needed a “Drexel”. Now I knew already that Drexel was a well-known manufacturer of a huge line of specialized watermain equipment, so I pulled their catalogues (Mr. Werenka had an office wall full of them) and spent about a day of browsing, (together with the technologist) searching but finding nothing even vaguely appropriate for this specific application.

I went to tell him that; this news did not satisfy him at all, and he walked straight to the Personnel Department. My Record of Employment is dated 7 September 1979 (**at left on the next page**). We had just been in Canada for 21 months, my salary had been increased from \$ 22 000 p.a. to \$ 25 000 p.a. in January 1979.

This was the first time in my career that I had experienced a “dismissal”. The form showed my insurable earnings for the previous 52 weeks as \$ 1,343.00, and another number on the form was \$ 530.00, which we presumed to be Unemployment Insurance benefit we would receive, per week. This was all new to us, and quite unexpected. Lydia and I had a hard time accepting this lay-off (or “firing”) as a professional, something that was unheard of in South Africa, perhaps due to the serious scarcity of engineers in the 1960’s. Was this the Canadian reality, was I (at almost 37 years old) soon going to be redundant like Gerry Kleinhout had become (at 46 years of age)? What would we then do? Strange, but the idea of returning to South Africa did not enter our

Employment and Immigration Canada / Emploi et Immigration Canada

RECORD OF EMPLOYMENT / RELEVÉ D'EMPLOI

RO1945540

Employer's Name and Address: **Bald, Crowther & Partners Limited**  
 P. O. Box 5600, Station A  
 Calgary, Alberta

Employer's Tax Identification No. (TIN): **BCA800068**

Employee's Name and Address: **DeRoedt, Jacob A.**  
 7536 - 39th Avenue N.W.  
 Calgary, Alberta T3B 1X2

Occupation: **Professional Engineer**

Employment Period: **September 7, 1979**

Pay Period: **Bi - Weekly**

Table of Earnings:

Pay Period	Period of Work	Pay Rate	Hours	Amount
1	530 <sup>00</sup>			
2				
3				
4				
5				
6				
7				
8				
9				
10	530 <sup>00</sup>			

Total of all entries - Amount paid: **5300<sup>00</sup>**

Total amount received: **13430<sup>00</sup>**

Signature: **C. Young**

minds for even one single moment. We had burnt our bridges there completely. So we prayed that the Lord God would provide for us, and believing that He would not forsake us.

Directly after I was “let go” by RCPL during the first week of September 1979, I restarted my efforts to get work from other consulting firms. I spoke to John Gill again early in the week after my dismissal, and directly after that to a Mr. A. Copeman, headhunter in downtown. This employment agent told me that UMA had a vacancy for a municipal engineer, and I told him I was not really interested (!) He then took me out on to the sidewalk in front of his ground floor office on 7 Avenue SW, showing me the many construction cranes hovering over us. **“That may seem as very impressive to you”**, he said, **“but on my books I have a number of unemployed architects”**. What was I to make of these kind and well-intended words by somebody supposedly “in the know”?

I have often considered these words as a good indication of economical fluctuation and the “business cycle”, and even more so in an economy fueled by fossil fuels like oil, coal and natural gas. Alberta had run on high octane gasoline for a while; how long would and could it really last? (The same situation exists right now, in 2019 / 2020.)



(I am not absolutely sure on which of the two red dots on the map I worked in September 1979.)

Before hearing anything from UMA, I had a good meeting with a Mr. Bulych, P.Eng., of a firm called Torchinsky Consultants Ltd. (or one of its subsidiaries) at his office at 1 - 5632 Burbank Road SE, just off Blackfoot Trail SE. This firm also had an office in Edmonton, and I was promptly hired for a short term assignment, on a project near Lac la Biche in Northern Alberta. This work entailed the preliminary design of an access road and parking lot at a boat launch (or campground) at Beaver Lake, in a Provincial Park in (or near to) what is now called the Beaver Lake Cree Nation Reserve.<sup>79</sup> I was given a roll of conceptual sketches and directions to the Edmonton office, and the next day drove my 1964

<sup>79</sup> I don't know if this was an Alberta Provincial Parks project, or a band project (which would obviously have been under Federal jurisdiction.) I guess it was the latter location – which would mean the **east site** on the aerial imagery.

Dodge Polara north for more information. After an extensive meeting with people in the Edmonton office (whose names escape me), I drove to Lac la Biche and took a long close look at the site (on the east side of Beaver Lake, see **previous page**) and also had a talk with the chief of the Indian Band, surnamed Cardinal, which (I understood) was a very common surname. At his house (or that of one of the Band Councillors?), I saw the largest pile of empty beer bottles in my life! I had supper at the village's only (Chinese) restaurant (one that did not have any chopsticks!) and stayed over at its only motel. The next day, I drove west and reported to the engineer and technicians in Edmonton, (the office was on the south side), drafting up some road profiles – I recall that there was a steep section from the access road to the parking lot – and after working hours, returned by way of Highway 2 to Calgary.

Even before submitting the above Record of Employment to apply for U.I. Insurance benefits, Al Swanson of UMA phoned me at home and asked to come for an interview with him and John Gill, at 2450 Kensington Road NW, and this resulted in an almost direct offer of employment, starting when “on 23 October 1979 an indefinite contract of employment was entered into between the Plaintiff and the Defendant which contract had an implied term that the Defendant would give the Plaintiff reasonable notice of termination of the contract if the said contract was terminated without cause.”<sup>80</sup> And from that day, I enjoyed three full years at that firm in Calgary.

My employment at UMA made it possible for us to move to a more appropriate house at **5423 Lakeview Drive SW**. We had already thought about moving closer to work since the spring of 1979, and had in fact been driving around with a realtor. In October, with somewhat better remuneration, we found a suitable and affordable house.<sup>81</sup> We sold before actually buying, and made some profit on 7536 - 39 Avenue NW. Our move to Lakeview meant that our children could use their bicycles to Calgary Christian School, and I could use Calgary Transit from a bus stop in front of our house, straight to 2540 Kensington Road NW, on a route with a bus every 12 minutes.<sup>82</sup> RCPL had been extremely inaccessible by public transit. I later learnt that planning, survey and municipal engineering for the entire Lakeview subdivision had been done by Underwood McLellan & Associates, a firm that had started in Saskatoon in 1911 with a long Calgary association. We moved on 2 January 1980, when the temperature was above the freezing point.<sup>83</sup> By that time, we had also changed our church affiliation, from attending the Maranatha Christian Reformed Church in Montgomery (adjacent to Bowness) to the Canadian Reformed Church at Calgary, which rented the old red brick Renfrew United Church just east of the downtown – where as a family, we enjoyed worshipping the Lord under the ministry of the Rev. Dick de Jong, and did all kinds of things unrelated to my professional career.



I would like to close this chapter by mentioning some of RCPL's other projects in the City of Calgary. There was the widening of the Glenmore Causeway, where Harvey Olsen supervised a very challenging project with lots of traffic to accommodate. There was the 5 Street SW CPR underpass that had been designed by Tom Martin (while at RCPL) a few years earlier. See **left** for a view from the south. There was the Bonnybrook Sewerage Treatment Plant upgrade project; I cannot recall the two engineers' names for that

project to whom I had shown a SAICE article about activated sludge as tertiary sewage treatment at the Heidelberg (Transvaal) treatment plant, written by Mr. Bernie Bergman, Pr.Eng., even before he started BSB&P, my

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<sup>80</sup> Quoted from a “Statement of Claim” prepared by Vickers, Gillis, Pomerance, Dartnell & Knibbe, February 1983.

<sup>81</sup> Residential areas close to RCPL were comparable to Lakeview, but SE Calgary was known for poor air quality.

<sup>82</sup> For all my three years at UMA, I used a Zipcard for unlimited use of Calgary Transit. The City promoted this.

<sup>83</sup> Two weeks later, friends of our moved, and it was - 20 degrees Celsius when we helped them move.

first employer (See Part 1). These colleagues were quite interested, but I never heard if the City of Calgary was. There was also work in Fish Creek Provincial Park itself – Bernie Smira only established the north boundary for the use of (developer) clients who later developed the Anderson and Braeside areas. Much more was happening within RCPL, but maybe not the type of work that I had been hired for.



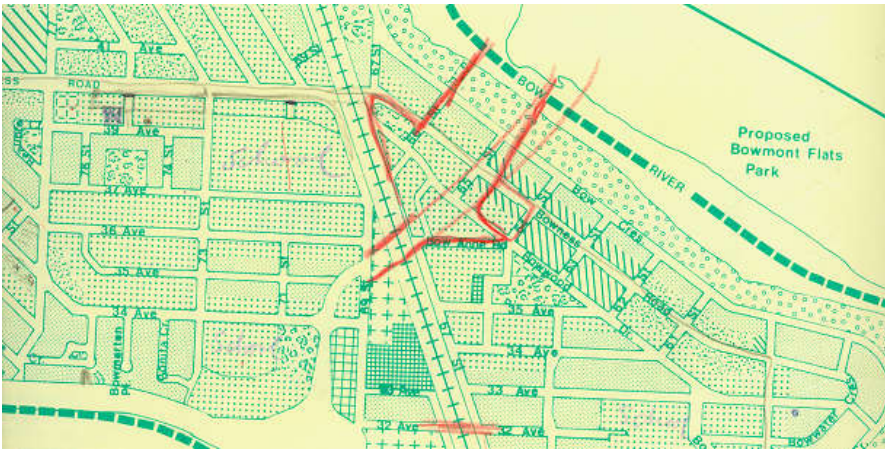
Something under construction through the Weaselhead.

Ed Tahmazian had regular meetings with the Sarcee Indian Band and Alberta Transportation about the possible construction of a highway through the Weaselhead and the Sarcee Reserve, which was at that time perceived as “not likely to ever happen”, but has recently (40 years later) become a reality – from the south to the north, see **at left**, as “under construction” (?) when Google was there at two recent occasions, (note the difference in shading!) This highway will likely relieve the traffic on Deerfoot Trail!

During my time with RCPL, there was once the possibility of work on a highway project near Banff, on the Trans-Canada Highway, additional to the existing route south of the bluff, where the Bighorn Sheep are the real tourist attraction. Returning from his trip to Banff, Ed Tahmazian saw Walter Werenka about some survey markers that had been discovered south of the marsh in that area. “I know,” said Walter, “that’s where they wanted to build the road (*meaning the Trans-Canada Highway?*) at first, but did not.”

On 15 February 1978, we had bought our home at 7536 - 39 Avenue NW for \$ 58,500.00, with two mortgages and a deposit of \$ 3,000.00 (!) We assumed a \$ 36,000.00 mortgage @ 12% interest with Canada Permanent Trust, and the vendors (who were moving to Lantzville on Vancouver Island) were willing to take on a second mortgage of \$ 15,500.00 @ 9%, which they promptly sold to CitiCorp. Our monthly mortgage payment became \$ 417.00 + \$ 128.34 = \$ 545.34, and the 1979 property tax was \$ 471.33. The main floor area was only 864 sq.ft., and the finished basement floor area was even smaller due to a “pony wall”. The house was 21 years old when we bought it, and it was somewhat primitive. But it faced south, with a large living room window, which we considered a bonus. Calgaryans could not understand why that would be an advantage! There was also a double heated garage with 220V wiring, and a plastic dome greenhouse with a natural gas line. For two summers, we did a lot of backyard vegetable gardening, in good soil with a lot of chickweed. After taking possession on 1 April 1978, we listed it on 12 October 1979 and sold that house for \$ 65,000 on 1 November 1979. Only then, having started to work at UMA, we started looking to buy, and were successful with a house in Lakeview for \$ 89,000 (I think) from a couple who were of Netherlandish background and were divorcing.

(My brother Arie from Berkeley California visited us twice when we lived in Bowness. Just before Christmas 1978, he arrived by Greyhound in downtown Calgary, and phoned us asking what bus he should take to Bowness. “The #1 Bowness bus”, we told him, “and we will wait at the bus stop just before 76 Street.” He then crossed 4<sup>th</sup> Avenue SW (where the Greyhound Depot was) and boarded a # 1 bus that took him to the very east of Forest Lawn, SE. At the end of the route, the driver asked that he leave the bus because he did not go any further. Arie then asked a passing policeman what to do, and showed him our address. The policeman followed the westbound bus and coached the driver (with a stream of non-reproducible words) to take Arie back through downtown and to Bowness Road, where we had been shivering in taking shifts, waiting for our visitor.)

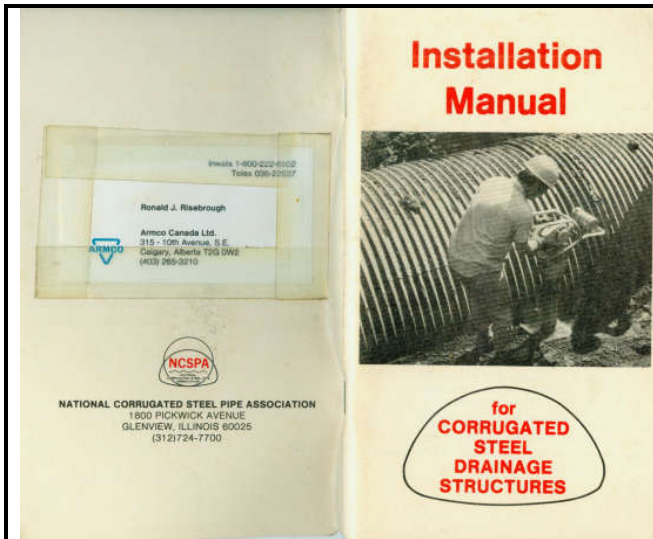


Proposed Land Use Classification and Sarcee Trail, Bowness, 1979.

In early 1979, we received a letter from the City of Calgary Planning Department, about an Open House on possible Land Use changes in Bowness, and I attended at the Bowness Community Association Hall on 28 February 1979. Bowness was changing, I heard, with more semi-detached housing to be allowed according to an already approved Bowmont Design Brief. That meeting's map shows (**at left**) red pencil lines that I doodled in during that evening presentation. Sarcee Trail was to be extended north (straight through Bowness), by crossing the Bow

River at its narrowest point. This needed "Land acquisition", and from current GoogleMaps imaging, one can see that none of this ever happened. This detail would explain why the road near the Spy Hill Jail has the same **name** Sarcee Trail (NW) as the Sarcee Trail (SW) that already existed, leading to an interchange on the Trans-Canada Highway, by the end of 1977, when we moved into the house on a property in the very left handed bottom corner, shaded **grey** (see **above**). The property at 7536 - 39 Avenue NW is also shown **above** in **grey** (at the "Ave"), as well as ..... a level railway crossing on 32 Avenue NW.

On the day that we arrived in Canada, Joe Boone had driven us **west** on John Laurie Boulevard NW and then **south** on Shaganappi Trail NW. Only two legs of that arterial road intersection were paved at that time; the other two legs (viz. the northwest one and the northeast one), did not exist. That point was the very end of Calgary's urban development in December 1977. Obviously, there was no traffic signal; only barriers that lead traffic in a single route through the intersection. The population was just under half a million, Edmonton was still larger.



One of the "**souvenirs**" of my RCPL days is a copy of the **ARMCO Installation Manual** of those years, with Mr. Ron Riseborough's business card taped to the back. This book later became a hardcopy, with a US edition and a Canadian edition. In my career in Canada and the US, I have often dealt with multiplate culverts (and Armco's other culverts and guardrails), either in conceptual and/or preliminary designs, detail design and site supervision.

In fact, the very first project of my own consulting firm **Grassroots Consulting Services** entailed site supervision of the installation of five large multiplate culverts on Vancouver Island, for the Victoria office of Armtec. That was in the summer / fall of 1992.

Without trying to (once again!) jump ahead for some decades, I will now need to continue to the more substantial (in more than one way) part of my professional career in Calgary, Alberta. This was a very productive time for me, but as I write this down, the words of A.M. Wellington (from 1903) come to mind once again. (See the Introduction of my Part 2.)

## Chapter 2 – Senior Transportation Engineer at UMA in Calgary (1979-1982).

I had known about UMA since 1975 (from yellow pages torn out of a telephone book), and had applied to their Mr. Bob Savage, P.Eng. in Edmonton, even receiving his kind negative response by letter; they had no vacancies at the time. In Calgary, I first met Al Swanson in January 1978; he was then with the firm of Damas & Smith, but in early 1979 he had left that firm for UMA. John Gill very rarely attended ITE meetings; he was an Australian and had worked for CNR (or CPR?) in Edmonton. John was already at UMA when Al became his boss, and in 1978 had written a “**Transportation Corridor and Roadway Network Study**” and a “**Highway 10 Functional Planning Study**”<sup>84</sup> for the City of Drumheller, one of UMA’s regular clients. UMA had a small office in Drumheller that provided municipal and land development engineering work (e.g. engineering surveys and inspections). They also did that kind of work for other nearby municipalities like Munson, Delia and Hanna. Ed Palm, P.Eng.’s office was directly next to the old brick City Hall, where Ray Romanetz, P.Eng., the City Engineer since 1973, had a single tiny and cluttered upstairs office. During the next three years, I did a lot of work for Alberta’s smallest city. And, to be honest: ... **I enjoyed almost all of it.**

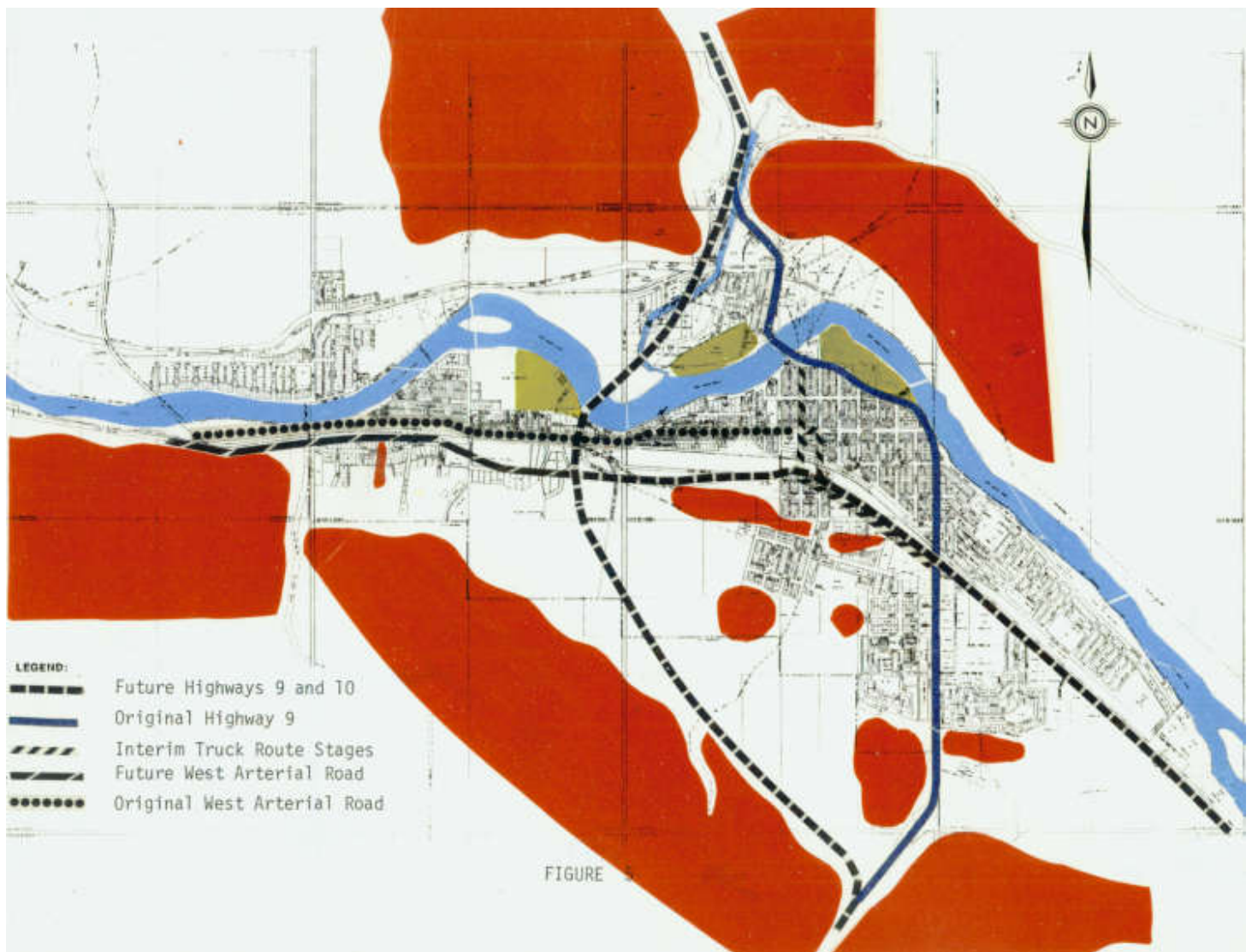


Figure 5 – see **next pages** for the context.

<sup>84</sup> ... “between Highway 9 and the eastern city limits”.

The above study had identified a few possible north-south bypass routes – with one preferred alternative, (**next page**) called “**Route B**”, approved by the City Council, the Calgary Regional Planning Commission<sup>85</sup> and Alberta Transportation. A preliminary study was needed to flesh out the (mostly geometrical but also other) criteria of the feasibility of such bypass. Drumheller, a city along the Red Deer River, had one north-south “**Highway 9**”, and it ran through downtown as 5 Street East and Riverside Drive (beside a park, hospital and swimming pool), with some sharp corners and an unsignalized railway crossing and a narrow two-lane concrete river bridge. Traffic was supposedly increasing; this was the main route between Calgary and Saskatoon, and major oil, gas and coal exploration north-east of town underway and getting started. Coal mining had been Drumheller’s first main economic industry, until oil was struck near Leduc (south of Edmonton) in 1947, but “**who knows, coal might come back at some time.**” One problematic coal mine was still open near East Coulee, on Drumheller’s other main thoroughfare; this “**Highway 10**” started at East Coulee and ended at Highway 9 in Drumheller. All other roads were secondary highways; one of them called “**North Dinosaur Trail**” existed on the north side of the Red Deer River. City limits were surrounded by three “counties” or “municipal districts”, but most former coal mining villages were administered by an elected “**Improvement District No. 7 Advisory Board**” directly out of Edmonton.

OPEN HOUSE  
for  
UMA Transportation Department  
STAFF and PARTNERS  
at the home of  
MR. & MRS. H. A. SWANSON  
SUNDAY, DECEMBER 16, 1979  
3:00 P.M. - 6:00 P.M.  
LOCATION 527 Lake Moraine Way S.E.  
R.S.V.P. Local 375

J. De Raadt.  
INTER OFFICE MEMO  
Underwood McLellan (1977) Ltd.  
TO NEW EMPLOYEES OF UMA DATE NOVEMBER 1, 1979  
FROM UMA SOCIAL COMMITTEE OUR FILE NO.  
RE 1979 CHILDREN'S CHRISTMAS PARTY  
THE UMA SOCIAL COMMITTEE IS HAVING A CHRISTMAS PARTY FOR CHILDREN OF UMA EMPLOYEES 12 YEARS AND UNDER. IT IS TO BE HELD ON SATURDAY, DECEMBER 8, 1979 AT THE ORANGE HALL. 11-2  
19 St. & 5 Ave. NW.  
WOULD THOSE EMPLOYEES WHO HAVE CHILDREN 12 YEARS AND UNDER, PLEASE FILL IN THE FORM SHOWN BELOW AND RETURN IT TO DEBBIE MOORHEAD (LOCAL 492) AS SOON AS POSSIBLE SO THAT ALL THE GIFTS MAY BE PURCHASED ON TIME.

◀ At UMA, the social fabric of the personnel was different. ▲



December 1979, taken in a downtown mall – at Sears(?)

When preparing this **Route B Study**, an opportunity arose to “multi-task” by assisting the Drumheller and Red Deer offices with other City projects at the same time. This bypass route would start on a small plateau halfway between the prairie level and the valley, where Highway 9 emerges from a gorge. It would run down a NW coulee with substantial excavations and embankment. It would cross the proposed South Dinosaur Trail (see **Figure 2 below**) at almost right angles, within a proposed industrial area where some squatters’ houses still existed and areas of possible subsidence due to coal undermining.<sup>86</sup> It would then cross two CNR and one CPR tracks in a CNR right-of-way, and Newcastle Trail which was north and adjacent to the railway right-of-way.<sup>87</sup> From there, it would cross the Red Deer River on a long sweeping horizontal curve, then turning east into the valley of Michichi Creek; af-

<sup>85</sup> I do not know when the Palliser Regional Planning Commission was formed; its head office was in Hanna.

<sup>86</sup> During the pre-development of one industrial property, a sinkhole fell near the intersection of Route B and South Dinosaur Trail, then called 5 Avenue or Industrial Avenue. It was soon filled with gravel, and its location was noted.

<sup>87</sup> Newcastle Trail had been the original west arterial road - and it led to SR 575 via Newcastle and Nacmine; these former coal mining hamlets had already been amalgamated with the City of Drumheller.

ter crossing it **twice**, it would join Highway 9 North in its existing coulee toward the plateau, the Drumheller Airport and Hanna.

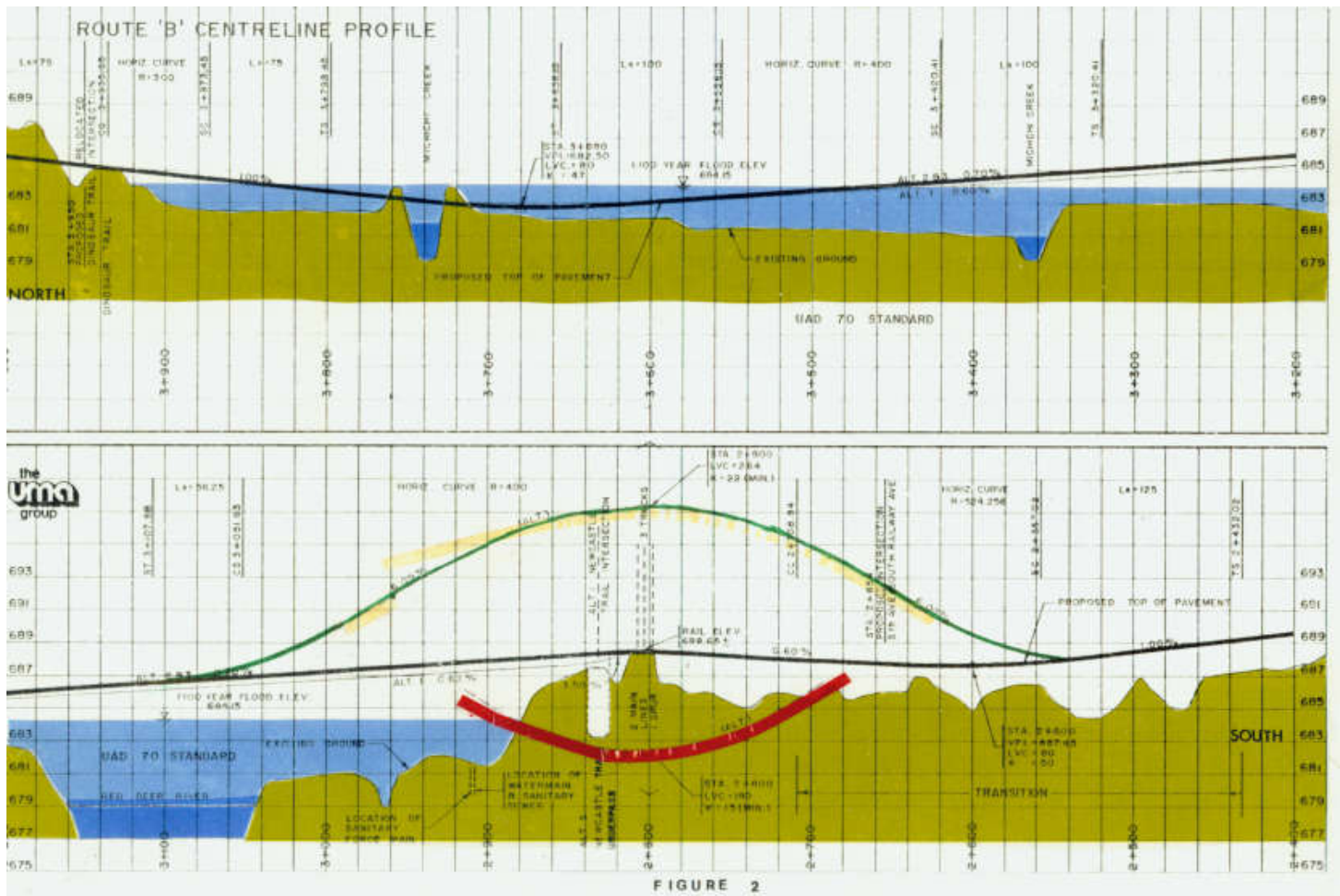


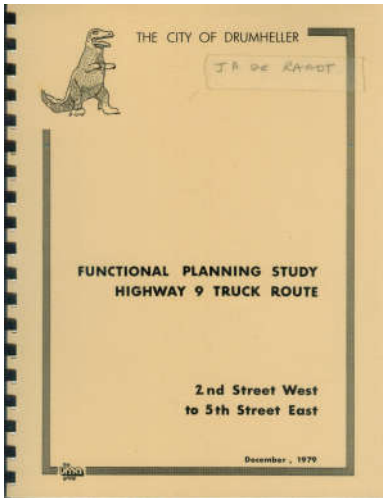
FIGURE 2

Like **Figure 5**, this slide called **Figure 2** (above) also comes from the presentation made in Halifax, N.S.

Our **Route B** Base Map was completed with information from all these photo-copied and then reduced photocopies, together with profiles and cross-sections. For 4.5 km length, we presented three vertical alignments near the Red Deer River Bridge, namely: **(1)** with a railway underpass, **(2)** with a railway level crossing and **(3)** with a railway overpass. These are shown in red, black and green above; light blue shows the 1:100 Flood Level. It was very clear that the railway under- and overpass proposals would have major impacts on Newcastle Trail and South Railway Avenue, and would cost much more. So the black line (with a low-level underpass of Newcastle Trail, next to the tracks, and an all-directional intersection at 5 Avenue / South Railway Avenue) was selected as the most feasible option. Alberta Transportation did not want to have intersections at Newcastle Trail **and** South Dinosaur Trail – this was “access control” at its best. The low point on the Red Deer River Bridge would be “off the bridge”: Major flooding in Drumheller had occurred within recorded history, and Alberta Environment’s requirements needed to be satisfied. The four span bridge would have two spans on tangent and two spans on spiral, and the whole route met design standards for a RCD 70 road classification (meaning a **Rural Collector Divided** road with a **70** km/h design speed). A divided highway through Drumheller? Yes. But only near the signalized intersections. This Route B Right-of-Way Study was completed in 1980. The next step was the Functional Planning Study for the central (east-west) portion of Highway 9; because Highway 10, east of Highway 9 to the east city limits, had been completed in early 1979.



In December 1979, my very first completed report was the “**Highway 9 Truck Route Functional Planning Study**”, starting at 5 Street East and ending at 2 Street West, including a new railway crossing. Much of the work had obviously already been done before I joined UMA, and I had a lot of help in completing it. (I signed



Setting the theme with Dino.

and sealed the report, as John Gill was visiting Australia.) This report detailed the land acquisition needs for a **Stage 1** and a **Stage 2**.<sup>88</sup> Completion of this study enabled the start of detail design (in 1980) on South Railway Avenue and an application to the CTC for the 2 Street West railway crossing, replacing the existing one at 1 Street West and abandonment of the Co-Op store’s spur crossing 2 Street West. Most of this work was initially done by Dwight Carter, P.Eng. and Ed Palm, P.Eng. (after Dwight left – see below). I later only dealt with some minor land acquisition revisions. I also had no hand in the railway crossing application to the CTC. But some things stand out from the project (that were later taken into consideration with the detail design):

(1) A previous “City Technologist” had placed many metal pins; these had been presumed by everybody as legal property monuments, but **they were not**; they looked a bit “different” and had not been placed by a legal land surveyor. This surprise came during the detail design, by a “legal survey” firm hired by the City through UMA (= Ed Palm). The decision was made to consider them invalid.<sup>89</sup>

(2) It had been discovered during the Functional Planning Study that the Alberta Liquor Control Board (out of Edmonton) was already remodeling an existing warehouse into Drumheller’s single liquor store, with no setback from South Railway Avenue at all, hardly any parking lot, and ... no building permit. Ray Romanetz told me later that he had personally phoned the ALCB and had been bluntly told: “We are a Provincial Crown Corporation; we do not need a municipal building permit.” I guess that this statement might be legally correct at that time, but would be frowned upon these days. South Railway Avenue was built during 1981.

(3) A large hotel was planned on a vacant parcel of land along South Railway Avenue, and a proper driveway access (fairly steep!) was designed, together with a median break on this section of the divided Highway 9.

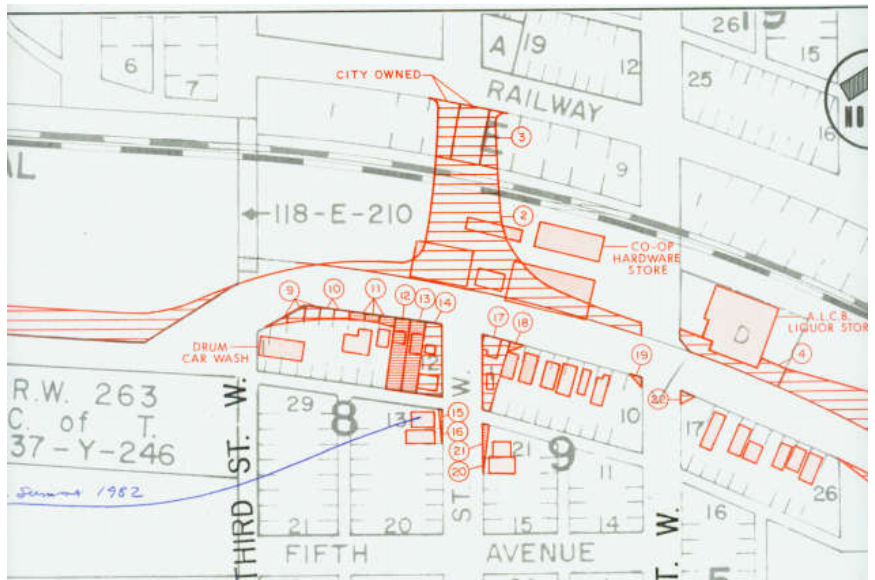
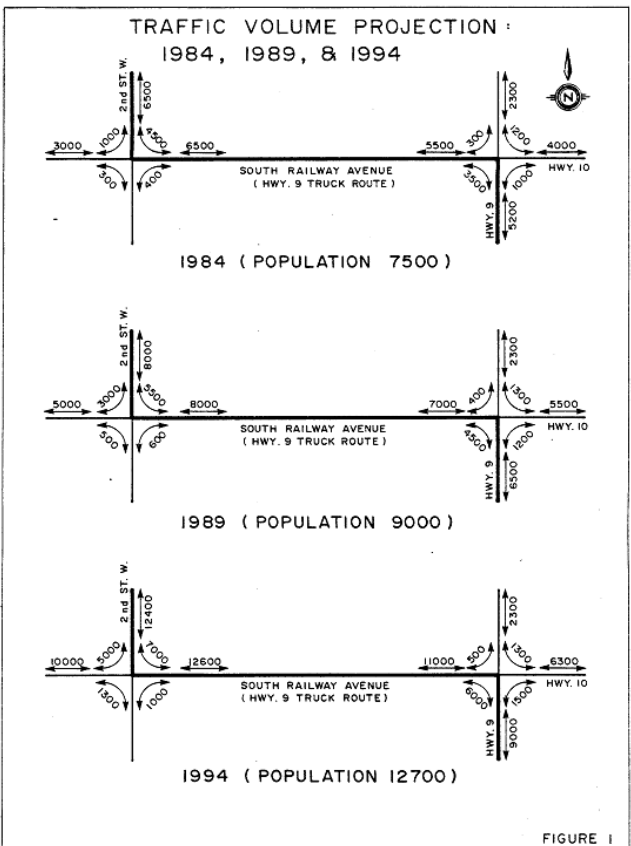
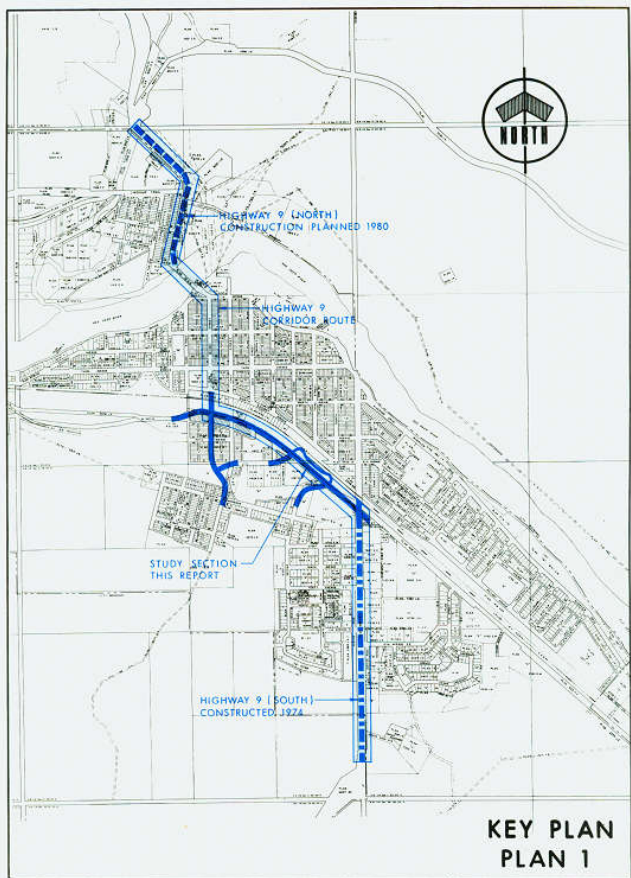
(4) Temporary bi-directional access to three grain elevators had to be provided, without trying to compromise the idea of a divided highway. One elevator had burnt in the summer of 1978, and CNR was going to cancel the leases for these facilities; they were very close to the widened road. These are all gone by now.

The Report for this project looked quite pretty. It had a complete list of property acquisitions, plans, profiles, cross-sections and other things, likely considered more essential by Alberta Transportation than by the City of Drumheller. From the Key Plan (**at top left, next page**) can be seen how all the projects made up the Major Continuous Corridor. Compare this with Figure 5 to note the small area of developable land. From this, the huge estimated population increase (from 7,500 in 1984 to **12,700 in 1994** may now (early 2020) be seen as just “folly”, and this can also be said of the Traffic Volume Projections for **1994**, (**at bottom left, next page**) not yet reached today.

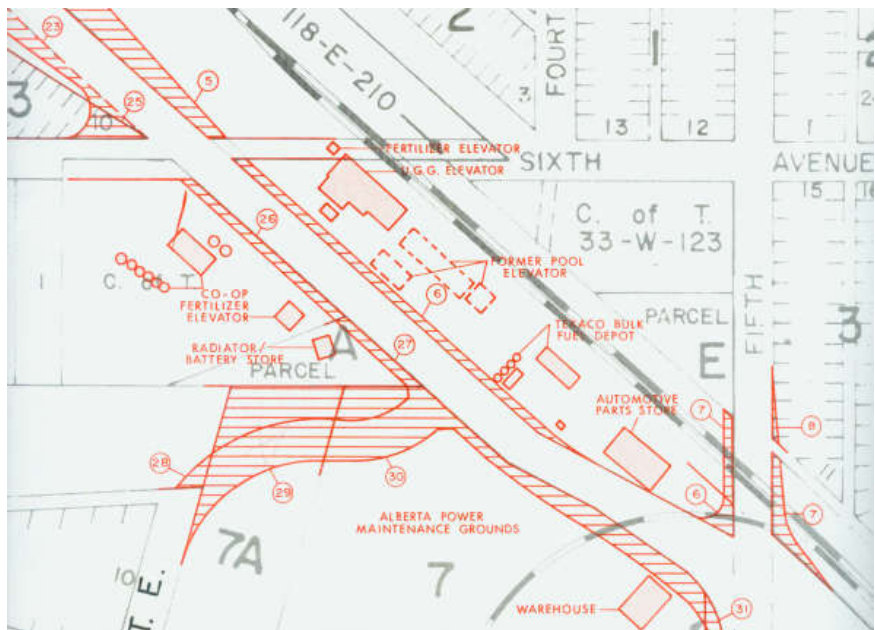
**At top right on the next page** is part of “Plan 9” in the report, showing the **western part** of property acquisition needs for this project. Note the ALCB quandary at 1 Street E. A revision at the site of “Drum Car Wash” was later approved, considering the “reversal” of its traffic operations. Similar drawings were made on

<sup>88</sup> A part of Stage 2 has not been built; it was for south extension of 2 Street W linking to Highway 9 near its curve. This may have been an earlier proposal that predated Alberta Transportation’s Major Continuous Corridor program.

<sup>89</sup> This likely cost the City some money.



the base plans, showing “Road Alignment” (Stages 1 and 2) and “Utilities”. The base plans had been made available by the Palliser Regional Planning Commission that served a large area around Drumheller.



Above is part of “Plan 10” in the report, showing the **eastern part** of property acquisition needs for this project. The elevators and Texaco fuel depot were on land leased from CNR, and obviously using the railway right-of-way limits as well.

In early 1980, the **East-West Arterial Road Feasibility Study** was started. This route would be the logical continuation of South Railway Avenue, west of 2 Street West. In this area, a few squatters’ houses, from some of the long gone coal mines, still existed.

The City retained **Mr. Peter Maxie**, a Land Agent from Calgary, to negotiate with the squatters to get them out of this proposed Industrial area. (A squatter owns his or her house but not the land; these people or their forebears had likely been coal mine employees.) Peter Maxie told me once (while travelling together to Drumheller) that his grandparents had “homesteaded” near Empress around 1920, when land was “almost free” and banks gave easy loans for establishing farms. A mere fifteen years later, almost everybody in that area had lost their farms to the banks. Some counties had gone bankrupt and had been taken over by the Provincial Government, as “Special Areas”, as there was absolutely no tax revenue, only dust and hardship. As a result, many Alberta farmers hated the banks with a vengeance, supporting either the Alberta Treasury Branch, started in 1938 by the Socred government, or Credit Unions. The squatter situation along the industrial route was acceptably resolved, and Peter Maxie later also resolved land, access and land paving issues on 2 Street West (see below).

The west limit of the above study was initially unknown, but in the fall of 1980, Canadian Pacific Limited applied to the Canadian Transport Commission for authority to abandon the operations on **two portions of their Langdon Subdivision**, namely between **Carbon and Kneehill** (west of Drumheller) and between **Rosedale and Grand Coulee** (east of Drumheller). The latter section was jointly operated with Canadian National Railways – which still served a single coal mine at Grand Coulee – and that (Government owned) railway company (a federal crown corporation) supported their archrival’s application.

I was requested to attend the formal “Hearing” of these two applications before a Panel of the Western Division of the CTC, held in the Knox United Church Hall, 195 - 3 Avenue East, Drumheller on 6 November 1980, and the file number was 39309.10. The Panel consisted of Mr. J.M. McDonough, the Chairman, and Commissioner Mr. B.R. Wolfe. There were some irate farmers, representatives of both railway companies and the grain handling companies, plus Mr. Gordon Taylor, the Member of Parliament for Bow River.<sup>90</sup> Ray Romanetz also attended, together with some City (and County) Councillors. The meeting did not lead to any violence, but it was clear that in Alberta, the CTC was definitely not kept in veneration.

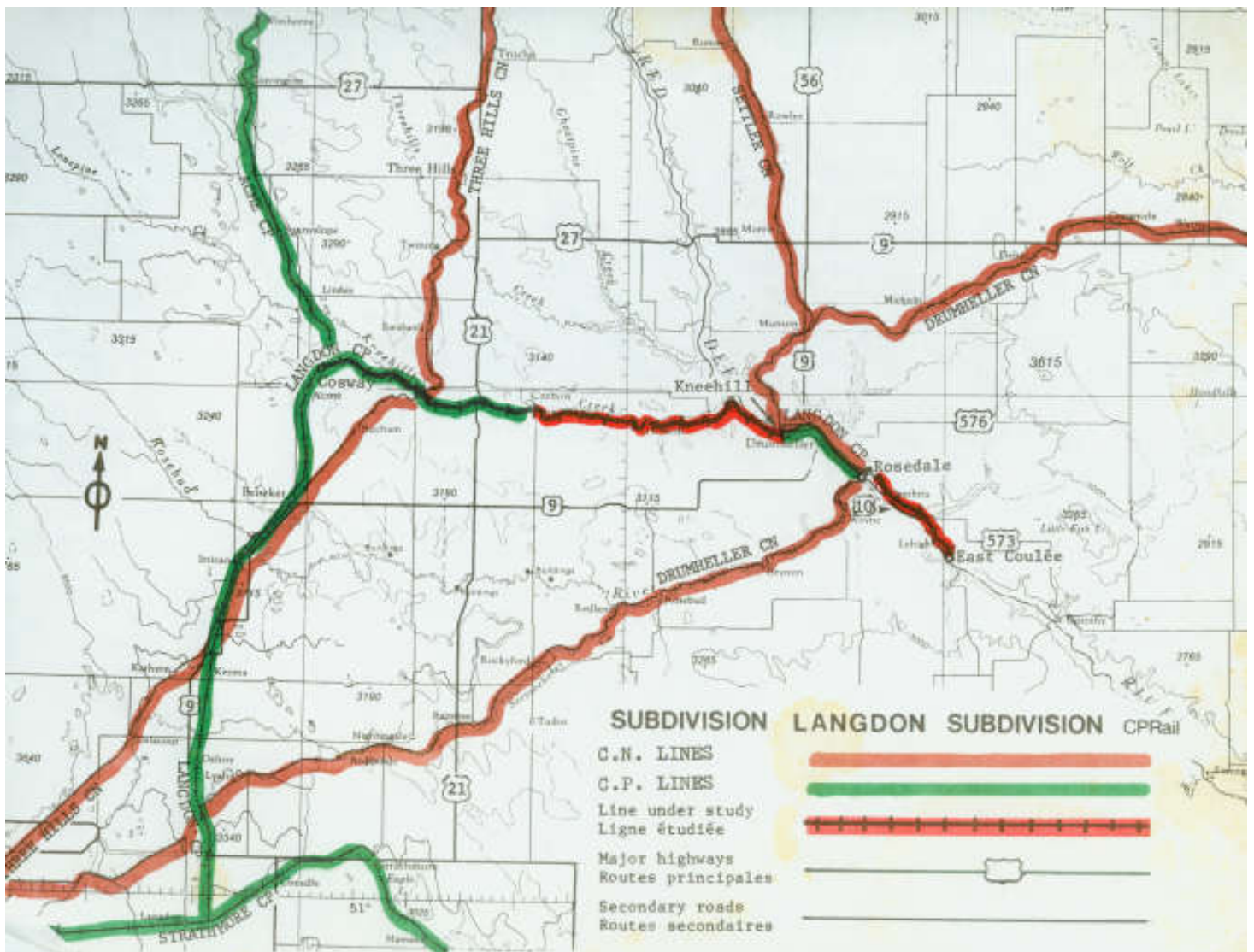
The strange thing was obviously that **if** the **Carbon to Kneehill** section of CPR would be abandoned, that strip of railway right-of-way (with a certain width and length, at a nice and gentle horizontal and vertical alignment, like most railway lines) would become available, and would be just **ideal** for a future “**South Dinosaur Trail**” – a route that might be developed into a looped road system with the already existing “**North Dinosaur Trail**” (not shown on the **map above**, which was part of the handout at the Hearing) that ended at the Bleriot Ferry on Highway 27 across the Red Deer River. Building a road on an abandoned railway right-of-way is not uncommon at all.<sup>91</sup> This was obviously a yet to be studied idea, contrary to the view of the farmers.

But I was only to attend that Hearing on behalf of the City of Drumheller’s consulting engineering firm, and had a chance to make a **short factual** presentation, observing the rest of the day-long proceedings, and returning home that evening with mixed feelings in my AMC Hornet. These was acerbated with a looming snow storm ahead of me, which got worse west of Beiseker as I approached Highway 2. Heading south, I just stuck to two narrow bare strips of asphalt on the snow-covered twinned highway. Hearing radio news of even poorer road conditions in Calgary, I turned off Highway 2 into the Huntingdon subdivision in the north end of the City, which was even worse (and slippery), and I was very glad getting home in Lakeview, safe and sound. It had been a scary ride, particularly because some drivers, even trucks, had driven by at reckless speeds.

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<sup>90</sup> He was a Conservative (opposition) MP, while the Federal Government was then in the hands of the Liberals.

<sup>91</sup> As child, I knew of a former railway between Gouwsluis and Aarlanderveen, rebuilt as a road named **Treinweg**. (Train Road). In South Africa, I was aware of the abandonment of the Tempe to Bloemfontein railway. In British Columbia, the VV&E railway right-of-way between Sterling Bridge and Princeton comes to mind; it became Highway 3. In the Lower Mainland, Grade Crescent (Langley City) and Robertson Crescent (Langley Township), were both part of the VV&E.



The **Carbon to Kneehill** section of the CPR’s Langdon Subdivision is **red** in the middle of the map in the handout **above**, while the **Rosedale to Grand Coulee** section is the **red** bottom right “appendix”.<sup>92</sup> Kneehill is where the CNR crosses the Red Deer River, toward the west limits of the City of Drumheller. The red line marked “**Three Hills CN**” was the former GTP’s “**Tofield-Calgary Branch Line**”.

Now why did CNR join their hated competitors in this abandonment application? Common interest, or necessity, due to an existing Act of Parliament? Alas, the latter. Only in Canada, eh? No love was lost between these firms, although their lawyers called each other “my friend” (see above). CPR was a typical 19<sup>th</sup> century “private enterprise”, and CNR was but the result of a somewhat complicated (unnecessary?) “government take-over” of a number of bankrupted railways, in the aftermath of WWI. For the answer to the question, I would like to quote John Schmidt, the Calgary Herald’s columnist on “Agriculture Alberta”. (This is absolute proof that railway abandonment takes a lot of time.) This newspaper reported on **1982-01-08** in an article titled “**Rail line closure could keep coal buried forever**”. The article (**at right on the next page**) also reported about what Mr. Gordon Taylor MP had said to farmers at Carbon, more than a year after the Hearing in Drumheller.

<sup>92</sup> Southeast of East Coulee, CPR’s Rosemary Subdivision (length 26 miles) had only operated for 48 years, It had been approved in 1929 (just before the dust bowl years of the 1930’s), and its operation had been abandoned by a Railway Transport Committee Order in October 1977. (I believe this railway once ran all the way to Lethbridge.)

# Drumheller appeals line abandonment

(Herald staff writer)

**DRUMHELLER** — The City of Drumheller and Century Coals Ltd. of East Coulee have appealed to the Federal Court of Canada an order the Canadian Transport Commission (CTC) made last Oct. 23.

The CTC order gave CP Rail and Canadian National the right to abandon a jointly operated 13-kilometre branch line from Rosedale to East Coulee. The branch joins CN trackage at Rosedale.

The line in question gives the coal mine — not producing at present — access to the CN Calgary-Saskatoon line and thence to the CP Drumheller-Carbon line, which the railway was permitted to abandon in the same order.

Robert Ross, counsel for Drumheller and Omar Patrick of Calgary, Century Coals president, says the appeal is based on his belief the CTC made a ruling outside its jurisdiction.

## Special act

The CTC can authorize abandonment of railway lines under authority of the Railway Act. However, this piece of track was not built under authority of that act but under a special act of Parliament in 1928.

The act ratifies an agreement by

the two railways in which CP built and maintained the line and the CN has running rights over it.

Ross contends that section 46 of the 1928 act binds the two railways to the agreement in perpetuity. The only way its terms could be altered is by the federal Parliament.

The agreement specifies that any traffic originating at East Coulee and destined to points served by each railway shall be carried by that railway.

## Inspect books

The agreement also calls for CN to inspect CP's books on the line operation. This is ironic in view of the fact CP denied the same right to intervenors in its abandonment application before CTC.

Ross said that if the railways remove the 13-kilometre line and the federal court declares for his clients, the railways might be forced to put the trackage back in place.

Although Century Coals at present is not producing, market prospects grow brighter as the users of energy look towards coal to supply future needs. It would be disastrous if the markets opened up and there was no rail access to the mine.

Taylor is fighting abandonment as he feels this particular line should be kept open to move coal out of the Century Coal mine at East Coulee. There is no market for the coal today, but he thinks there will be in the future as this particular grade of coal does not produce acid rain.

From Drumheller to East Coulee is 24 kilometres. CP has twinning rights over the Canadian National main line for the 10 kilometres from Drumheller to Rosedale. This stretch of line remains intact. From Rosedale to East Coulee, the 14-kilometre line is jointly operated by the two.

The joint operation was the subject of a special act of Parliament in 1928. It said the line shall be operated in perpetuity. Taylor and Century Coal say the line must stay in place until that act is repealed; that CTC has no jurisdiction over it.

So there is Century Coal with 125 million tons of the nation's best coal that will take 50 years to mine out. If a market becomes available a new method of transport will have to be found; otherwise it will be locked beneath the earth forever — an unpleasant prospect.<sup>93</sup>

Here isn't much grain moved over this particular line. But many farmers are angry that the Alberta Wheat Pool (AWP) didn't make any move to intervene

on their behalf to keep elevators at Sharples and Kirkpatrick open. This will necessitate longer hauls on their part plus the expenses for building better roads on their tax bills.

A few months later, in May 1982, the article at left above appeared in the Calgary Herald, stating that the City of Drumheller and Century Coals Ltd. both appealed the CTC's abandonment order of 23 October 1982, to the Federal Court of Canada, claiming that **"The CTC can authorize abandonment of railway lines under authority of the Railway Act. However, this piece of track was not built under authority of that act but under a special act of Parliament in 1928."** So the City believed Mr. Gordon Taylor, MP. I am not sure if this appeal was successful, but I doubt it.

The City of Drumheller, however, (the client of UMA) did not appeal the abandonment of the **Carbon to Kneehill** section of CPR's Langdon Subdivision, and this abandonment paved the way (*pun intended*) for the land acquisition<sup>94</sup>, detail design and construction of **"South Dinosaur Trail"** as a western continuation of South Railway Avenue within the City limits, and as AB-575 outside the City limits, completely in line with the text and intent of the original Transportation Corridor and Roadway Network Study.

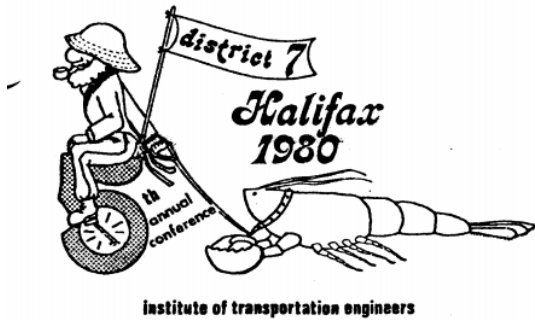
Even before the railway abandonment approval, I was asked to prepare an **"extended"** Functional Planning Study; I likely started with that in the winter or 1980 or spring of 1981. Alberta Transportation's **Major Con-**

<sup>93</sup> **"locked beneath the earth forever"** is what is now (2019) exactly what is happening. See also below for more.

<sup>94</sup> Abandoned railway right-of-ways were normally sold to municipalities and provincial governments, and also to owners of private land.

**tinuous Corridor** required “no private accesses, and no parking on either side.” Earlier, when papers had been solicited for the Fifth Annual District 7 (Canada) ITE Conference, to be held at Halifax, Nova Scotia, with the **appropriate theme** as shown on the “ADVANCE TECHNICAL AND SOCIAL PROGRAM” (see below), I asked if a presentation on Drumheller might perhaps be possible and be advancing the Institute in Canada. Al Swanson said “Yes”, and he enthusiastically supported that I prepare an abstract (and even edited it somewhat), and I mailed it to the organizing committee. I cannot remember asking John Gill about it; as already mentioned, he very seldom attended the ITE meetings. (I realized later that some friction between the two of us may already have developed then, due to this situation.)

## ADVANCE TECHNICAL AND SOCIAL PROGRAM



Fifth Annual District - 7 (Canada)  
ITE Conference, Chateau Halifax,  
Halifax, Nova Scotia, June 1 - 4, 1980

Theme: Transportation Planning And  
Traffic Engineering In Small  
Urban Areas

I enjoyed writing the paper titled “**Drumheller, a Transportation Planning Case Study**”, in which I outlined all the urban planning, transportation planning and highway engineering projects that UMA had completed for the City of Drumheller since 1970. **Slide 4 (at left on the next page)** from my paper outlined two “**what if**” situations on how things would have been simpler if in the past, a different decisions had been made. The **top part** shows what might have been possible if in 1959, an old bridge had not been rebuilt but a new road link and bridge instead (when CNR had closed the WYE where locomotives had turned before). That land might have been used for a very appropriate road link, although with a longer Red Deer River Bridge. A Court House had already been built on the “A” property, and is still there today, with adequate parking around it. While the site may at the time have been seen as perfect for a Court House, I still believe that the better bridge location ought to have been considered! A part of the Court House later became a temporary Drumheller City Hall, during construction of a new facility, and I re-met Ray Romanetz in 1985 in that building. He later became City Manager. His brother Garry also became a civil engineer, but I met him as a student doing summer vacation work as rodman for Ed Palm at UMA in Drumheller. I re-met him later, when he was Managing Principal at Stantec Consulting in Burnaby BC, and that was likely in the spring of 2009).

Many cities and towns, villages and hamlets in North America have these “A” or “Wye” properties for locomotive turning tracks. When diesel locomotives took over, these lands became completely redundant, and ways to develop these railway company-owned lands, have varied a lot.

The **bottom part left on the next page** shows the strange situation with an ALC Liquor store<sup>95</sup> along South Railway Avenue, and an existing house on its south side, so that a better alignment would be much more expensive. The road was basically “just squeezed in” between these restraints; nothing could be done about it. This is only one of many situations where agencies and departments within the same jurisdiction had not liaised earlier about a project and how to resolve an internal conflict. Ignoring or covering up these is a human trait.

<sup>95</sup> GoogleMaps imaging shows that this building is no longer an ALCB liquor store, but the Salvation Army!



..... The Bridge and Route that was not built in 1959  
 ■■■■■ The Bridge that was built

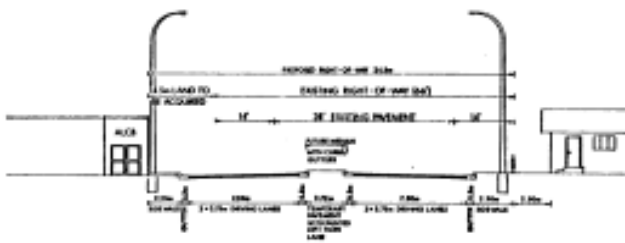


FIGURE 4 (b)

SSA, 0+340 SOUTH RAILWAY AVENUE

I enjoyed the Conference tremendously. I spoke just before lunch on Monday 2 June, and my paper seemed to merge seamlessly with the others. On Sunday morning, I walked from the CP Hotel to the Holiday Inn to attend church services in one of the upstairs meeting rooms, listening to Pastor Tom Aicken of the (then) Reformed Presbyterian Church, Evangelical Synod, whom I later met again in Langley BC. I climbed the Halifax Citadel National Historical Site, and between the two services, I visited the Halifax Public Gardens and then the museum at the citadel. I also walked by a small storefront for promoting of what is now the Museum about the 2017 Halifax Explosion, and I enjoyed the Harbour Cruise. The famous “Bluenose” was not in port; a group of us (not only from Western Canada) went to eat at the Henry House. Though it was not my first flight out of Calgary, it was an experience to fly to a new (for me) but actually much older part of Canada. I never thought that I would have two more opportunities to visit Halifax, within the same decade<sup>96</sup>. Those will be described in Part 4, Deo Volente.

South Railway Avenue – being both “Highway 9 & Highway 10” – was being widened in the downtown, between the unsignalized railway crossings at the (existing) 5 Street East and the (new) 2 Street West. This was designed and built before the actual abandonment of the existing railway crossing at 1 Street West could occur. Alberta Transportation wanted this done (and paid 90% of it) under a “**Major Continuous Corridor Program**” for all cities; this scheme

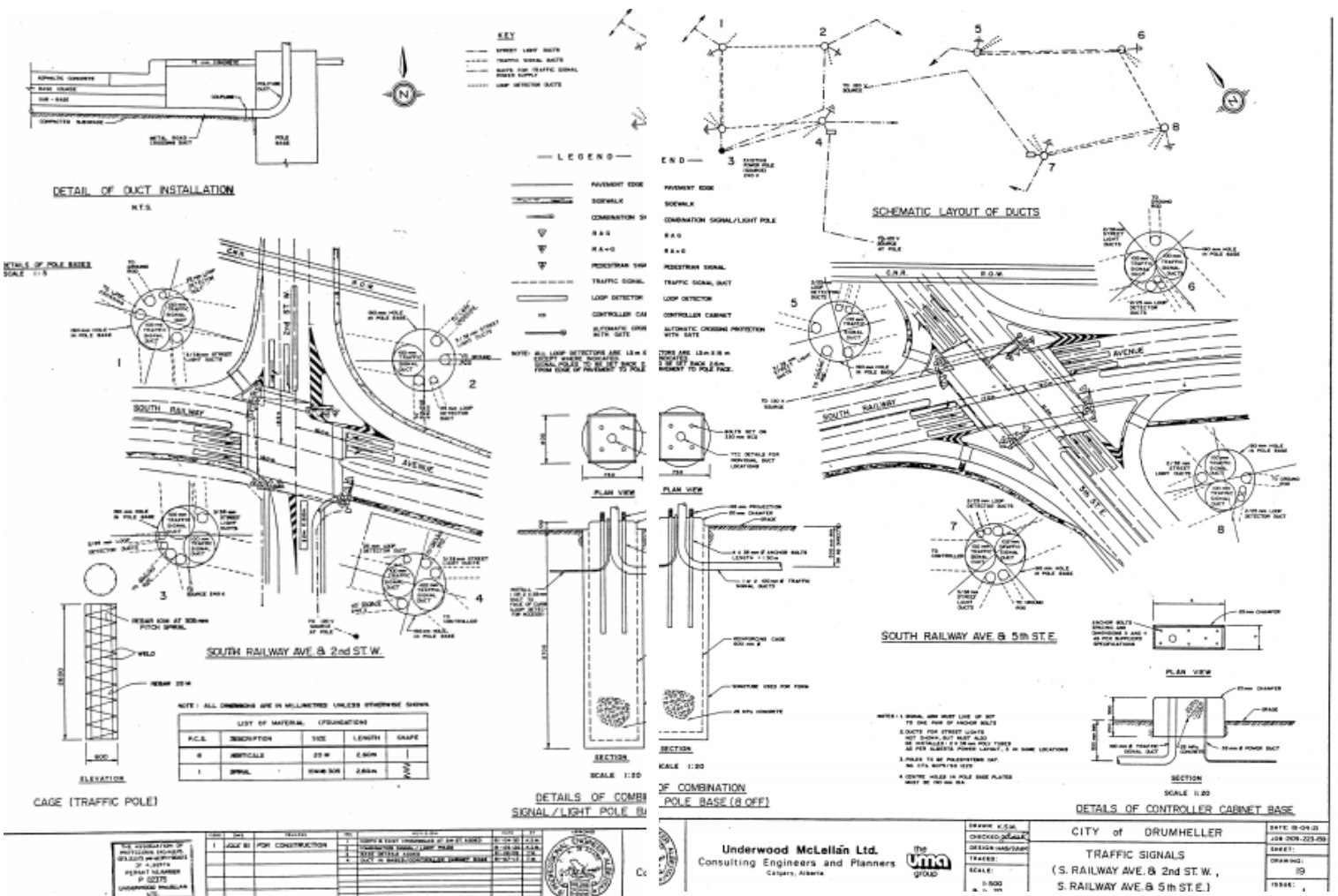
eliminated zig-zag through traffic movements almost completely. The regulatory process had already been completed, together with land acquisition from Drumheller Co-Op. After roadway construction, and as part of the approved project, two traffic signals had to be designed and installed, with interfaces to the railway line. I was asked to design them and prepare the tender documents. I did this during the late summer of 1981, (as the only traffic signals I ever designed!) and must acknowledge receiving support from Al Swanson, who showed me the ropes and gave me copies of similar projects he designed when employed by the City of Calgary Transportation Department.

At RCPL, I had not been involved with tender documentation for the Deerfoot Trail projects, (that had been Ian Williams’ bailiwick, I seem to recall), and this project became my first encounter of the system in Canada. I was also encouraged to use much from two fairly recent UMA documents for the City of North Battleford, Saskatchewan. The project was advertised, and tenders closed on 9 October 1981. The Notice to Tenderers had been signed by Ray Romanetz and concluded with the words: “**The Owner reserves the right to waive informalities in, or reject any or all tenders, or to accept, in whole or in part, the tender deemed most favourable in the interest of the Owner.**” The low tenderer was a local firm, M-M Electric (a division of Rio de Janeiro Holdings Ltd.) of 1132 South Railway Avenue, P.O. Box 45, Drumheller T0J 0Y0. A week later, furth-

<sup>96</sup> I had a CIBC Convenience Card, as we had accounts with the CIBC branch next to 2540 Kensington Road NW. Great was my disappointment when I could not use that card in Halifax – where the teller asked me: “Is Calgary on the computer?” This lady probably did not know that Calgary was at that time Western Canada’s computer capital.



er to some discussions between Mr. Rio Morelli, Mr. Romanetz and myself, three items were amended and re-priced (two up and one down) so that the Contract was then awarded for \$ 19,172.68. The signals were successfully installed, but I recall **two strange situations**, the first one of which was likely due to my “**relative ignorance**” about these things, but also due to a **lack of communication** between UMA and those who had designed the signal component for the railway crossing signals and the electric gates and flashing lights, all of which were connected to the “bungalow” near the crossing, meaning one of the two railway companies. There should (and could) have been more and better liaison. How much more, I later learnt with the Marshall Road railway crossing project in Abbotsford, B.C. My \$1 million+ Grassroots Consulting Services project dealt with an arterial road crossing two railways, operated by two different railway companies, the one under CTC and the other under provincial control. These **two situations** – (to go back to my days with UMA, without disrupting “My Professional Career”) were:



2 Street West.

Two halves of the same drawings, (with some overlap).

5 Street East.

(1) Al Swanson and I once drove to Drumheller in bitterly cold weather, where the Contractor convinced us that it was very difficult to squeeze all the many wires into the conduits at the signal poles at 5 Avenue East. The plans (**shown above**) clearly show this difficulty. Why? There were additional wires to be pulled through, due to the interconnection with the wires for the railway crossing! These had not been considered in my design. Oops! Should this not have been done in liaison with the CN people who design railway crossing signals?



(2) I was phoned in my office in Calgary, by someone who asked me to speak (urgently) to the Contractor or to the City Engineer.: “**The signal heads have been installed improperly**”, he said, “**the red and green balls are in the wrong locations, and I know that because I am colour blind, but can still distinguish between “stop” and “go”, so I know what each signals means. The red ball should always be on the left. Please phone the Contractor before someone has a crash there, because I almost had one.**”

**What did he mean?** Drumheller and Calgary were at that time the only Alberta cities with signal heads mounted **horizontally** (= not **vertically**) on the horizontal signal arm that crosses oncoming lanes (see **photo below**).

Why? This would obviously decrease the surface area of “**what is on the pole**”, and was allowed as an **alternative arrangement** in the Canadian Manual of Uniform Traffic Control Devices (and also in the USA, as I later saw this at Sandpoint in Idaho). The City of Drumheller had likely followed the idea of Calgary (via Al Swanson, a former City of Calgary employee) due to normal strong (west) gusts of wind. I made a phone call to Mr. Morelli requesting him to switch the lenses, and the problem was solved. Shown at **right below** is the May 2018 GoogleMaps imaging. I wondered how many other cities follow this “common sense approach” to reduce wind loads on signal poles. Please note from the drawing **on the previous page** that the design had been by HAS / JAdR, and that I had checked the drawing with my hand written initials, meaning that I had checked Rev. 4 on the “Issued for Construction” version – which is the only appropriate way.<sup>97</sup>

I also wrote 1980 and 1981 **Traffic Counts Reports** on Highway 9 – from a permanent counter at the Red Deer River Bridge that Ed Palm monitored through the years, on behalf of the City. The Major Continuous Corridor idea was due to Alberta Transportation’s concerns about **through traffic** and not **local traffic**, and it was unexpectedly strange to report that the 1981 AADT was actually a bit less than what the 1980 AADT had been. An explanation for this was difficult to pinpoint, but became very clear a few years later, when exploration and drilling dried up, and the coal fired power plants were not built.

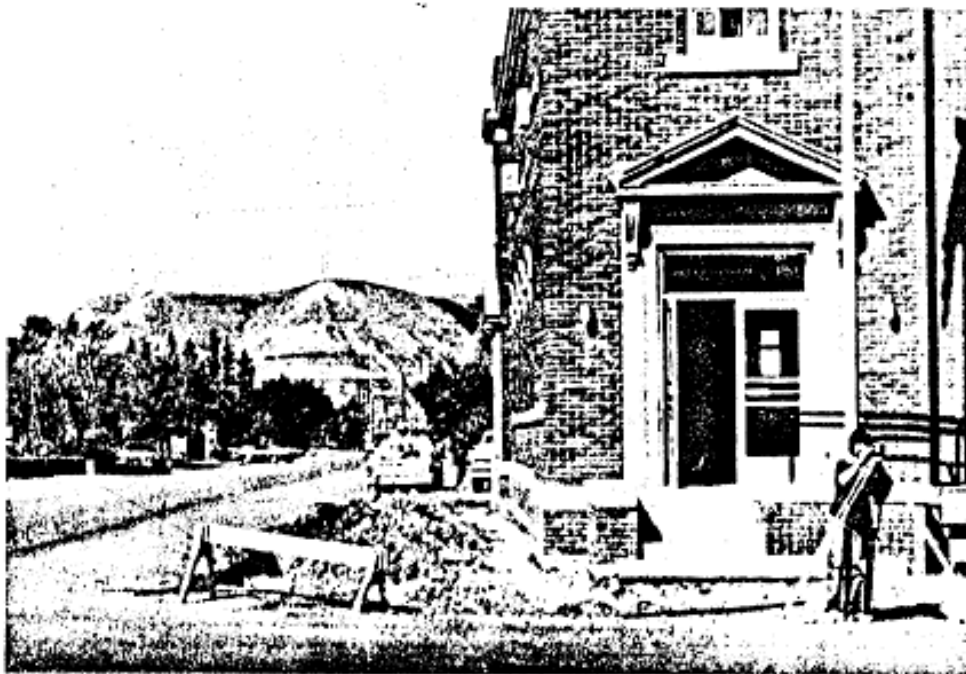


Horizontal traffic signals, South Railway Avenue and 2 Street West, Drumheller.

The **Functional Planning Study for 2 Street West**, between the railway crossing and the Red Deer River Bridge, was next, as the new **Major Continuous Corridor**. We prepared a report with colourful detailed overlays (and a cost estimate) of how this part of Highway 9 could be widened, with new sidewalks and closures of most of the existing front yard driveways. The rage at that time was the use of black and white “ortho-photo mapping” which was handled by the various Regional Planning Commissions (like Palliser). (Not all organizations were yet on board with this). Mr. Mike Chibuk, P.Eng. in Edmonton approved the report, and the work proceeded into detail design (mostly in Drumheller) and tender stage, with a tender closing date of Wednesday 7 July 1982. When the work was “under construction” later that summer, the City Engineer, Ray Romanetz wrote an article about it in the Drumheller Mail (**see next page**), particularly stressing the political and social aspects of the projects, and public input required, something that has increased by leaps and bounds since then. This is perhaps due to the perception (whether right or wrong) that highway improvements did not always adequately address concerns expressed by the public. “Your tax dollars at work”, for sure, but...

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<sup>97</sup> Drumheller has Chinook winds just like Calgary. The further east and the further north, the less Chinooks. Pole Systems was the firm in Calgary that designed the street light and traffic signals poles, for a specific wind load.



# Upgrading of 2nd Street West

On April 1, 1979 the Province of Alberta announced a new 6 year assistance program for Alberta Transportation. One of the new programs introduced was called the "Major Continuous Corridor" program. This program was established in recognition of the need and difficulties encountered by many Alberta cities in the provision of a continuous roadway connection of high standard, throughout their corporate area, to the Province's primary highway system. This specific program is to provide special assistance to promote and ensure the planning and construction of such a corridor through each city.

The program provided 90% provincial contribution toward planning, design, construction and land acquisition, as provincial funds became available.

After several years of study and negotiation, the City of Drumheller and Alberta Transportation entered into an agreement on November 2, 1981, which provided for the construction of a high standard roadway through Drumheller, to be completed by December 31, 1983.

The City and the Province both agreed that an alternate

route or bypass involving a second bridge, to move heavy truck traffic transporting dangerous goods out of the downtown, was a long term goal, but realized that the existing highway would have to be upgraded in the interim, until Drumheller's growth could justify such an extremely expensive proposal. On this basis the city on August 3, 1978 designated Highway #9 as the Major Continuous Corridor through Drumheller.

The province agreed that portions of the major corridor that had already been constructed in previous years under the Arterial Roadway Program on a 2/3 - 1/3 cost sharing basis would qualify for the additional grant money to bring the provincial share up to 90%.

Highway #9 South was constructed in 1972, Highway #9 North in 1980 and South Railway Avenue in 1981. The only portion remaining that required upgrading was 2nd Street West from North Railway Avenue to the Red Deer River Bridge. A study funded jointly by the City and the Palliser Regional Planning Commission is currently investigating the feasibility of widening the existing Red Deer River Bridge.

Total construction cost of the entire corridor from the North City Limits to the South is estimated at \$3,900,000.00 of which the province by the end of this year will have contributed \$3,510,000.00.

A public hearing was held by City Council on April 20, 1982 to discuss concerns relating to the proposed reconstruction of 2nd Street West.

The public was advised that: (1) The roadway would be widened by 8 feet in order to meet Alberta Transportation Standards. The City must meet these standards to qualify for funding. (2) The widening would require that 50 boulevard trees be removed. (3) Access to the dinosaur adjacent to Red Deer River Bridge at the intersection of Riverside Avenue and 2nd Street West will be closed and a cul de sac built. Signing will be installed to direct traffic to the Dinosaur off 2nd Avenue West. (4) New underground high pressure sodium street lights would be installed. (5) The existing separate curb and sidewalk would be replaced with monolithic sidewalk. (6) Public parking would be eliminated from 2nd Street West, however an equivalent number of off street parking stalls would be

A project of  
the  
**uma**  
group

Article written by  
R.M. Romanetz, P.Eng.,  
City Engineer,  
City of Drumheller.

provided in the near vicinity. (7) Direct access from properties on to the roadway, especially driveways, that allowed people to back out on to the highway, would eventually have to be closed. The City agreed to meet with property owner's affected to negotiate alternate access. (8) The City will pave back lanes along 2nd Street West to improve access to property owners rear yards.

Construction started on the roadway on August 9, 1982. The City of Drumheller thoroughly investigated the possibility of moving the boulevard trees. Discussions with various nurseries and horticulturists indicated that considering the size, age, general condition of the trees, along with the time of the year, their chance of survival after a move was slim. Quotations from tree movers in Calgary indicated a cost of \$200.00/tree or a total cost of approximately \$10,000.00. It was the City's opinion that it was money better spent to buy a 4 - 5" caliper tree from a nursery at a cost of \$150.00 and have its survival guaranteed rather than risk the moving.

Front driveway access agreements have been obtained from the majority of home owners. The City is currently negotiating for several lots along 2nd Street West to allow the construction of public parking lots. If the weather cooperates and no serious construction difficulties occur we expect construction to be completed by October 15, 1982. This will complete the Major Corridor improvements other than potential widening of the Red Deer River Bridge.

We would like to thank the residents of Drumheller for their patience and cooperation over the past number of years.

Photocopying this newspaper clipping, I intended to use it as part of UMA's promotional material, but ... I never had a chance, because I was laid off **four weeks later**. I had already been asked to research newspapers like the Red Deer Advocate for marketing purposes, (see below) but things were going downhill fast that specific summer. I had a hard time preparing honest timesheets with an adequate number of "billable" hours. Clients were cancelling projects left, right and centre. "It was the worst of times" to quote Charles Dickens. But I have not done justice to the other work done by UMA for the City of Drumheller in those three years.



Red Deer River Bridge, Drumheller, 2019.

I had no involvement with the Red Deer River Bridge deck refurbishing of 1983. I remember the name of a construction company called "**Smith Engineering**" that specialized in doing this work all over Southern Alberta with high density concrete. They had to do much sand-blasting on the old concrete, to expose the rotten parts, and then installing new high tensile rebar mats before casting a new deck with high density concrete. The bridge was also widened in that year, with sidewalks, separating barriers and new streetlighting. I saw them at

work when going to Oyen (see below). GoogleMaps (2015) shows a two-lane bridge; the concrete deck (from 1984?) does not seem very healthy. Is Route B bypass still an option now, **in 2020**? Of course not. Things have changed over the past 45 years, and one cannot try to turn the clock backwards. The reasons why so many things have changed, are beyond the scope of this book, and the engineering profession cannot be exclusively blamed. The fact that changes were made by well-meaning politicians, who may have misunderstood engineering reports, is also part of the problem. How much should a transportation professional try to make himself (or herself) clear to non-professionals? [In my Task 2 in the Graduate Course called "Transport Planning 5 SV 1" at the University of Pretoria, I wrote in April 1977 about traffic predictions: "**All these things are almost unpredictable in the long term, except for economists, and then only by considering all external and internal factors. We know the present, and the past is also known, but extrapolation into the future is very difficult.**" I received an **8/10** mark.]



South Dinosaur Trail, opposite Kneehill.

Tender Documents like the one for the traffic signals, (mentioned above) included mostly "boiler plate" text. The Specifications show the phrase **UMA Alberta/80** and were all in metric. Most Standard Drawings show "UMA" and had been developed by the firm over many years, and used for various Alberta clients.

After the **west** railway abandonment had occurred, I wrote a **Functional Planning Study for South Dinosaur Trail**. This was not a high-tech report, but just showed (in 11" x 17" format, black-and-white) how the route (now Road AB-575 "out of town") could be built on the existing railway right-of-way, past Nacmine and west to Kirkpatrick. From there, the existing Road 837 would run where Road 838

(North Dinosaur Trail) turns east to Bleriot Ferry, and then south, back to the city. The horizontal alignment could require some large but relatively short excavations (like the one shown **at left**) and a vertical alignment to dream about. There were hardly any utilities to be relocated; the former village of Nacmine would only receive

two accesses at appropriate locations, while a frontage road and the former railway crossings would be eliminated. The old Newcastle Trail would be dead-ended as a cul-de-sac near where the CNR crosses the Red Deer River. It all made good sense, also by providing access to an existing Mobile Home Park and the (existing and planned) industrial areas. Alberta Transportation’s Safety Engineer, Alec Cherwenuk, P.Eng., also liked it. I cannot remember when I completed that study, but in the summer of 1985, when I had a chance to visit Calgary for an ITE Meeting, I dropped in at the UMA office and Dwight Carter<sup>98</sup> showed me some brand new photos, with these kind words: **“This is what South Dinosaur Trail looks like, Jacob, for which you prepared a Functional Planning Study. I later did the detail design, and we built it since; the Contractor paved it last week. It all worked out fine.”**



December 1980, at home in Lakeview.



Camping at Carseland.



Weaselhead, Calgary, 1982.

The last project I handled for the City of Drumheller was the preparation of a huge **“1981 Road Needs Study.”** Alberta Transportation funded this work for all cities in the province, but not for towns. All the cities had a transit component as part of the Study, but Drumheller did not have buses, so that work was not needed. The analysis was done together with Ed Palm, and it meant a lot of paperwork. The condition of all roads and bridges in Drumheller were evaluated, because the provincial government wanted to know how much it would cost to repair them at some time in the future. That would be done by “money from Edmonton”, of course. UMA, the sole provider of engineering services to the City, did this work, but the project limits also included all of Improvement District 7, which meant “all around the valley bottom”. The idea behind this was a future abandonment of I.D. 7 and its complete annexation into the City. This is actually what happened after 1997, by Alberta Municipal Affairs, and if I am not mistaken, portions of the three counties surrounding Drumheller, (**Starland, Three Hills and Badlands**) were also involved in that land swap.

While Ed Palm and his crew did the analysis work for the entire street system in the City – including streets in private subdivisions with substantial frost heave problems – I analyzed all the “out-of-City” rural roads and bridges, and did the synthesis by collating Ed’s work for preparation into two very thick 11” x 17” reports with blue covers. This meant making enquiries with Alberta Transportation about all the minor roads in I.D. 7, but also about all the steel truss bridges on the (lower) Rosebud River. It was discovered that these structures had all been “re-cycled”, i.e. that they had initially been installed somewhere else. The plaques on these bridges showed their origin (company, city and year). Why had they been moved? Because they had been built for “low load ratings”, and could not have remained on their former primary road locations when trucks became

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<sup>98</sup> Dwight Carter had been UMA’s Office Manager of the (small) Red Deer office, left Canada for a year (or more) and returned to Calgary after I had been laid off. UMA’s office in Red Deer had probably been closed by that time.

larger and heavier. Some of these bridges were over 50 year old and in poor shape. Question: Would these bridges be replaced **sooner**, by adjusting the boundary of the City of Drumheller?

I take some pride in the fact that when these reports were completed (meaning printed and “cerloxed”), I was able to personally take them to Edmonton. I took an early PWA flight – there was one every hour – from Calgary International to Edmonton Municipal, and then a taxi to Mr. Steve Quiring,<sup>99</sup> P.Eng., in the Alberta Transportation Building, delivering the 2 x 20 blue sets (a heavy load) where I was then told: **“You are the first, Jacob!”** The first of what? **The first of all the Alberta cities.** Although it was the exact deadline date (and we had done our work targeting the completion date), Steve told me that none of the dozen-or-so cities in Alberta, sorry, none of their consulting firms, were yet “finished” with their work.



I also became involved in highway design, transportation engineering and traffic planning outside Drumheller. (These are not identical subdisciplines of civil engineering!) I was busy, and hope to highlight the projects, all over Southern Alberta but also in British Columbia. Some of these projects I did directly for Al Swanson, but I realized that John Gill was my actual supervisor. Not all of this went without causing friction.

For Alberta Transportation, we designed a  $\pm 30$  km section of the **Smith-Dorrien Road** in Kananaskis country. (I am not sure if it was already a Provincial Park or not.) I dealt directly with Mr. Paul Fetsko, P.Eng., the “Regional Construction Consultant”, in Alberta Transportation’s Calgary office, in the same building where the Motor Vehicles Department was, fairly close to the UMA office. This design – on the east side of Spray Lake – had been started before, but it had to be **revised, metricated and verified** so that mylar drawings could be used for a tender document, for construction prior to the 1988 Calgary Winter Olympics bid. The mylar drawings had a black aerial photo background, and the problem was that even the smallest design revision meant erasing this background (which could not be restored). The client also wanted design data of all the CSP culverts for this route, particularly the major culverts **B, P** and **T**, (multi-plates?) and some timber bridge designs. This project was then documented, tendered and awarded; construction supervision was by Larry Rice, CET, UMA’s technologist out of Canmore, (whose wife worked at Brewster Transportation in that town next to Banff.) UMA’s Planning Department was at that time doing studies to promote one of the venues for the City’s Winter Olympic bid, at Mount Smuts. While I later heard that this effort never went anywhere, Smith-Dorrien Road was constructed. I cannot remember where the south project limit was, but the north

project limit was at a river crossing and not close to where the road goes over a dam and steeply drops into Canmore. Around the middle of the project length was a certain Mud Creek. This creek (and others) ran on top of a ridge, called a glacial fan, and it looked funny because the vertical alignment had a crest curve over the fast running stream. With that project already, Geoff Williams became my sidekick – together with big Al. There was also a wonderful but “out-of-this-world” (or European Alps?) concept at that time, (which we called the Peter Loughheed Tunnel), one that would connect the valleys north and south, almost directly under the mountain peak named after his father.

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<sup>99</sup> I met Steve again once, either during an RTAC meeting in Winnipeg, or at the WACHO meeting in Yellowknife.

During the 1981 Summary Report of the Transportation Department of the Calgary Branch, on 16 April 1982, it was reported that “For the \$6 million construction project, Underwood McLellan Ltd. fees will total about \$ 2.1 million, with \$0.76 million in expenses and disbursements. Al Swanson reported: “Smith-Dorrien Road’s high fees were due to a bad construction season and slow Contractor.” On 27 July 1982, I received Alberta Transportation’s specification for “Double Asphalt Surface Treatment”, likely from Mr. Paul Fetsko. That work was never done; recent GoogleMaps imagery shows that Smith-Dorrien Road is still ..... a gravel road.<sup>100</sup> Perhaps this is because nothing happened at the south end of Spray Lake, where the UMA planners had envisaged a huge ski lodge, quite close to Mount Smuts.

I also did the preliminary design of a proposed “**vehicle arrester bed**” for northbound runaway vehicles that would travel down to a very steep T-intersection with an east-west road. This was where Secondary Road 842 has a T-intersection with Secondary Road 564, northeast of Standard – see **left**.) These were both minor roads, SR 842 even more minor than SR 564 (and perhaps SR 842 was chip-sealed while SR 564 was paved) and a fatal crash or two had occurred at that spot. I received and used much (Great Britain research based) information on this from Alberta Transportation, but do not remember who the contact person was – was it also perhaps Mr. Paul Fetsko? See **map at left** for the location.



I became involved in transportation planning projects, through Al Swanson. Two Transportation Studies were done in the Calgary office, for the **Town of Lacombe** and the **Town of Stettler**. These municipalities resorted under the influence sphere (= “marketing area”) of the municipal engineering division in the Edmonton office. Perhaps drafting power (or brain power?) in Calgary had resulted in UMA’s policy decision to get the work done by us. I was not the main author of these reports; Al Swanson and Bob Savage signed on page 2, and a lot of people got acknowledged on page 5. I did much of the field work by making a number of trips to Lacombe (north of Red Deer) and Stettler (directly east of Red Deer). Stettler had a tiny UMA

office (like Ed Palm’s in Drumheller), manned by Ken Lauder, P.Eng; that was very handy as he assisted e.g. with the “down-town parking utilization survey” (with angle parking) and the lists of existing and proposed (including some “pie-in-the-sky”) subdivision applications and rezoning applications that had to be shown on the many Figures. For Lacombe, I used Dwight Carter’s information, and that of Gary Will, P.Eng., Red Deer Manager, but had to liaise with UMA staff in Edmonton as well, because not doing so would be treading on their toes or infringing into their bailiwick. For Stettler it was Jim Pyesmany P.Eng.; for Lacombe it was Wayne Moorman, P.Eng., whom I later met several times and in several roles.<sup>101</sup>

I have a copy of the Draft Report for Stettler, dated May 1981. Population of the town (“about **5,000** persons in 1981” would rise to “about **7,800** persons by 2001”. “Two further population horizons were included in the analysis, namely, a population of **12,000** (by 2021), which corresponds to the area included in the Urban Ex-

<sup>100</sup> Theo tells me that it is now (2020) the very best gravel road in Alberta.

<sup>101</sup> I dealt with Wayne Moorman because an engineer in Burnaby (or Kamloops) had resigned from UMA. Around 1986, Wayne was UMA’s Office Manager in Whitehorse. In late 1989, I met Wayne again, at UMA in Victoria. I was then preparing the preliminary design of the Inland Island Highway Project for Crippen Consultants, while Wayne was the sidekick of Mr. Cavallieri, P.Eng., because UMA was MoTH’s “Project Management Consultant.” (This was just after the Major Projects Division of MoTH had been disbanded.) Wayne then took up a position in Campbell River, I believe, with either the City or the Regional District. He may well have been “transferred” out of Alberta in the early 1980’s, just like Ian Williams at Stanley, because things in BC were never as bad as in Alberta.

pansion Study, and a population of about **39,000** which assumes full development of the Town and a surrounding area with one half mile.” Thirty-five years after these words were written, according to the 2016 Census of Statistics Canada, “the Town of Stettler recorded a population of **5,952**, a 3.5% change from its 2011 population of **5,748**. And in the 2006 Census, that number had been **5,445**. And by the way, “the 2008 municipal census is **5,843**.” As an additional tidbit, Wikipedia adds: “The median household income in 2005 for Stettler was \$56,201, which is below the Alberta provincial average of \$63,988.” So it is now a relatively poor population. Our Transportation Study had assumed the 2021 population straight from the Town’s Future Land Use Plan (Map 1) of the Municipal General Plan of 1976, without even questioning it. (Do I hear the refrain of “The Charge of the Light Brigade” again?) All this would seem to prove one thing: These “hifalutin” population projection numbers have not yet been reached, are not currently proposed to be reached, and will likely never be reached in rural Alberta. Recent history proves this also for Drumheller. For that City, UMA’s 1971 Transportation System Traffic Study had predicted a “**future population of 8,000**”, the 1978 “Transportation Corridor and Roadway Network Study” had assumed a “**future regional population of 15,000**”, while it was about **6,200** in 1981, and the most recent (2016) Census by Statistics Canada shows the Town of Drumheller recorded a population of **7,982**,<sup>102</sup> which was less than its 2011 population of **8,029**, which was more than its 2006 population of **7,932**, and all this with the expanded boundaries of what is now (once again) ... **a Town**.<sup>103</sup>

The Town of Stettler’s “Draft Report” of May 1981 **sat still for a while**, and had not yet been revamped into a Final Report in September 1982. By that time, the Alberta economy was heading downhill fast. But another issue had not been addressed by the Town fathers: CNR’s application for abandonment of the whole of their Stettler Subdivision, between Dinosaur Junction (directly north of Drumheller, see the **Map on page 57 above** near the Village of Munson) and Ferlow Junction – a distance of a whopping **108.02 miles**, the longest abandonment application ever, for a line first built by Canadian Northern Railway. The application’s Hearing had been held in October 1981, and the Town of Stettler had decided not to provide input or an objection. How do I know that? Well, I had personally asked Mr. Dunford, the Town Administrator, to do so; this would affect UMA’s Transportation Study. He (or his council) had kept their mouths shut. Be that as it may, the Canadian Transport Commission had approved CNR’s application, and the north-south railway line through Stettler would be abandoned and likely broken up, paving the way (pun intended) for some possible future road construction to streamline the existing road system.

Enter Mr. Arnold Malone, Conservative MP for the Crowfoot riding. By a very minor side door, enter also **yours truly**, who had just exited the UMA stage and was an avid reader of the Calgary Herald, particularly John Schmidt’s articles about rural Alberta. This journalist had written an article about the pending abandonment of the Stettler Subdivision, how unfair it had been and how much further the farmers would have to haul their grain, and that their MP was going to appeal the decision. I decided to write that honourable Member of Parliament a letter, with just a morsel of additional (new) information that might help his appeal or make it stronger. I had nothing to lose, I thought, I was already unemployed.... Should I have done this, or not?

“Dear Mr. Malone”, I wrote on 1982-11-24 (and I needed no stamp for a letter to the House of Commons, of which I now quote paragraph 4 only): “**Amongst other things, this Transportation Study investigated the feasibility of the CN right-of-way, which bisects Stettler from south to north, as a future main road, and concluded that this right-of-way would not be necessary as north-south traffic (Highway 56) is not that much and is much less than the east-west traffic through town. This information may now be used to appeal the abandonment order.**”

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<sup>102</sup> From the above, it might be concluded that the original 1971 study was not that far off.

<sup>103</sup> Drumheller was first a Village, then a Town and since 1930 a City. Stories have always been around that either in 1930, when 3,000 was the magic minimum population required for city status, or before that, headstones in the cemetery were counted. Perhaps there might be some truth to that. And maybe this has been done elsewhere, some other time.

The secretary of Mr. Malone replied to me on 1982-11-29 already, stating that:

“Mr. Malone received your letter of November 24<sup>th</sup> respecting the abandonment of the Stettler C.N. Subdivision just prior to his departure for Brazil to attend a conference on population and development.

On November 26<sup>th</sup> Mr. Malone forwarded his appeal against the decision to abandon the line to the Canadian Transport Commission and for your interest please find enclosed a copy of the appeal.

Your interest in writing to Mr. Malone to share your concerns is very much appreciated. Yours truly.”

Mr. Malone’s strong and fact filled 5-page appeal was at first **unsuccessful**, because the CTC issued an Abandonment Order for abandonment on 31 August 1984.<sup>104</sup> (Obviously, these things took time in Ottawa.) But this Order caused an outcry in Alberta, to have it reversed or postponed by the federal cabinet, which ended in eventual “success”. (I do not know if this cabinet action occurred **before or after** the change of government

AN APPEAL BY ARNOLD MALONE, M.P. (CROWFOOT)

IN THE MATTER OF an application by the Canadian National Railway Company, pursuant to Section 253 of the Railway Act, for authority to abandon the operation of the Stettler Subdivision between Ferlow Junction (mileage 0.0) to Dinosaur (mileage 108.02) a total distance of 108.02 miles, in the Province of Alberta

(Appeal heading of 26 November 1982 – 5 pages.)

that year, when Brian Mulroney’s Conservatives took over from John Turner’s Liberals.) In 1986 the “Stetter Subdivision of CN” became Tom Payne’s privately owned “short line railway” called **Central Western Railway**, of which a part still remains. Many magazine articles and TV shows featured a company president as a machinist, serving everybody (mostly farmers) along the 108 miles in mid-central Alberta, with a non-unionized staff of 8 after 1990.

What happened that year? On 22 March 1990, new legislation removed short-line railways (like the CWR) from federal jurisdiction; Mr. Tom Payne’s complaint (that federal labour regulations made it impossible for him to run “his” railway), had been taken to heart in Ottawa, because these had imposed on CWR the union that represented workers when CN had owned the line. So CWR came under Alberta’s provincial jurisdiction, just like “Southern Railway of British Columbia”, which still is (or was?) under BC’s provincial jurisdiction. This law allowed the CWR to continue operating. Only in the late years of the decade, much of the line was abandoned, but the right-of-way was left in place for long stretches (as a linear park) by the East Central Alberta Railway Society. Three railway stations, at Meeting Creek, Donalda and Rowley, were preserved by the Canadian Northern Society.

Since that time, the Alberta Prairie Railway and

Editor: Charles Sterling

TUESDAY, JANUARY 17, 1984

## Rail abandonment ruling to be appealed to cabinet

By Elsie Ross

(Herald staff writer)

STETTLER — An east-central Alberta group, angry at the proposed abandonment of a major branch rail line, plans to take its case to Ottawa in an attempt to keep the line open.

The railway linking Camrose and Drumheller is to be abandoned Aug. 31 unless the federal cabinet reverses or postpones a Canadian Transport Commission abandonment order, Neil Wagstaff, secretary of the Save the CN Stettler Subdivision committee, said Monday.

The committee is asking municipalities, groups and individuals for donations to help meet the estimated \$10,000 it will cost to send a delegation of six to eight people to Ottawa in late February to appeal to the federal cabinet.

The transport commission has ordered that 140 kilometres of the 172-km line be abandoned — the longest line ever proposed for abandonment in Western Canada.

Abandonment of the line would affect at least 600 farms which in 1982 delivered grain to the nine delivery points along the line. The same year, 6.6 million bushels of grain were hauled by rail from the delivery points.

If the line is removed, farmers will have to haul their grain an additional 19 to 48 km to the next nearest delivery points, said Wagstaff.

The commission order could also have an impact on the cost of grain transportation to the provincial government’s proposed new grain terminal in Prince Rupert, B.C., he said.

If the line, which could be a fairly important connection to the coast, remains open it could reduce the distance for grain shipments from southeastern Alberta by 240 km.

A number of individuals, municipalities and organizations have been trying to save the line for the past three years but so far have been unsuccessful.

The commission’s abandonment order, originally scheduled to take effect Aug. 31, 1983, followed a public hearing at which CN Rail requested permission to abandon the rail line because it was losing money and required a government subsidy.

The committee, though, believes that since then it has assembled a considerable amount of new information not available at the original hearing which can demonstrate the line shouldn’t be abandoned.

For example, the new Crow Rate legislation providing increased money to railways for hauling grain should now make the line profitable, Wagstaff suggested.

The committee also disputes CN’s estimated cost of upgrading the rail line. Its consultant figured the work would cost a minimum of \$15 million

compared to the rail company’s \$31-million estimate.

However, Randy Lebell, transport commission secretary, pointed out that several local groups appealed in April, 1983. The appeal body upheld the commission’s earlier decision but postponed the date of abandonment for a year.

Legal action could still be a possibility if the cabinet refuses to change the commission decision, said Wagstaff.

The committee, though, is waiting for a court decision on an appeal by Acadia Valley farmers. They have challenged the right of the federal cabinet to set aside a previous cabinet order which prohibited abandonment of a branch line for five years.

The Federal Court of Appeal, in a special sitting Monday in Calgary, reserved its decision on the appeal.

David MacLean, lawyer for the farmers, argued that the decision by the Liberal cabinet to reverse an earlier decision by the Conservative government was “to subvert the clearly-expressed intention of Parliament” because the section of the Railway Act was designed to prevent the rail line abandonment.

However, lawyers for CN, the federal Justice Department and the transport commission argued that cabinet has the right to revoke regulations taking into account the broad purposes of the legislation.

<sup>104</sup> The original proposed abandonment date had been 31 August 1982, according to the text of the Appeal.

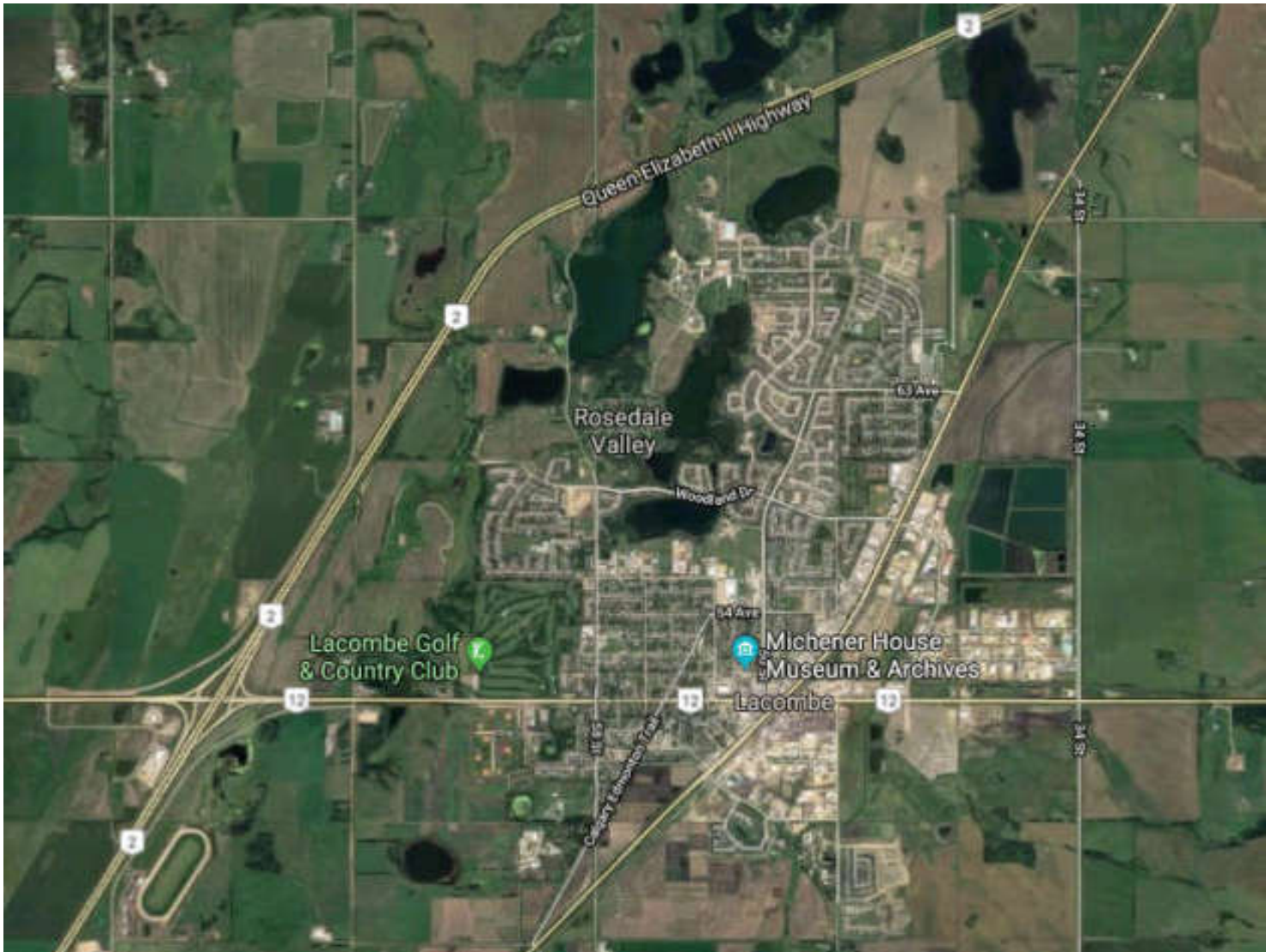


the East Central Alberta Heritage Society preserved the line from Stettler to Big Valley as an active rail line featuring freight operations and Alberta Prairie's popular excursion trains, some of them even with steam locomotives. In August 2012, Lydia and I visited the restored (but unfortunately unattended) **Meeting Creek station**. See photos **below**. At that time, I was a regular Saturday volunteer at the Fort Langley CN station, also on an "original" Canadian Northern Railway line, and I did this for 2010, 2011 and 2012. The two station buildings are virtually identical, though painted in different colours, and Fort Langley's station building is a showpiece for a large international crowd, whom I told many details of western Canada's railway history, in a CN station master's uniform that actually fit. I would like to consider that work also "professional", the reason why it is added at this part of describing my career, which I enjoyed. From the outside, it all looks very nice, but the absolute demise of western Canada's passenger rail system (over the years, via the Federal Crown Corporation called VIA Rail – pun intended) is very sad indeed but outside the scope of these Memoirs. What started out (by Canadian Pacific) as a transportation mode to move **people** and to bring Canada together, has been squandered into oblivion. Even private ventures like the Rocky Mountain Pioneer are mostly running empty, just like VIA Rail's cross continental "service" (which is an obvious oxymoron).



While the railways in many other civilized countries in the world (particularly western Europe) as well as what we disparagingly used to call the "third world" are progressing with lots of passenger trains at high and super-high speeds, the photos on this page are indications of a transportation mode of the 19<sup>th</sup> and 20<sup>th</sup> century, con-

ceived, financed, built, operated, mismanaged and then almost abandoned in Canada. Currently living outside Osoyoos, British Columbia, which was also once served by a railway line, (CPR for a short period - late 1944 to 1976), I believe to know what I am talking about. **I therefore rest my case.**



City of Lacombe, 2019.

The Lacombe Transportation Study was an equally interesting project, also affected by a railway running straight through the downtown, with level crossings that should not have been allowed eighty years earlier. Without any systematic approach to abandon them, without the political will, without a “stick” of some sort, what could be done – by any of the three levels of government? Geoff Williams and I did a lot of work in preparing base plans, doing traffic counts, checking zoning at the Town office and measuring existing road widths. Establishing a Road Classification system for the future was a challenge, and in cooperation with the Red Deer Regional Planning Commission, we prepared a draft report and then a final report that was accepted. On one day trip with Geoff, in my purple AMC Gremlin, we hit a block of black ice in the northbound fast lane, on an uphill section of Highway 2, and before we knew anything, we were sitting in the median, facing south. We had just skid off. Because the median was neither soggy nor showy, it was a piece of cake to resume our

trip, though a bit shaken. Big Al was good in putting the report together; he used the official town crest on the front cover<sup>105</sup>, which was much appreciated by the Town Clerk, Mr. Gus Jautz.

Lacombe is served by the original CPR line linking Calgary with Edmonton, (called the C & E) and still had a limited passenger service in those days, with Budd cars. Its fleet of rolling stock was being diminished by every crash, and note that there were about 200 railway crossings between these cities, **one per mile**. This “service” was soon discontinued. (Was it operated by VIA Rail at one time?) For this town, now called the City of Lacombe, growth occurred, but not as much as suggested in our Transportation Study. Why? Because it is located on the north-south road axis of Alberta called the Queen Elizabeth II Highway, a.k.a. Highway 2. The 2016 Census shows a population of **13,057**, up from the 2011 Census that had **11,707** and the 2006 Census that had an (adjusted) number of **11,752**, while in 1981, if I am not mistaken, like Stettler, it was **just over 5,000**.

Rural depopulation is not a typical Alberta or typical Canadian problem; it has happened internationally, but here are the numbers for one small village we visited as family in 1983, and later as well. **Oyen**, on Highway 9 directly east of Hanna, had a population of about **1,500** people, and we visited the George Doupe family south of town. In 2006, the population was **1,105**, in 2011 it was **973** and in 2016 it was **1,001**. But hey, there’s a 2017 municipal census that shows **1,022** while the 2015 municipal census was **1,006**. Who does one believe, Statistics Canada or the town fathers and/or mothers? So the population hovers around a thousand people, and there are probably a few hundred towns and villages in Western Canada in the same predicament. It is really sad to see rural towns and villages dwindle or die.

One draftsman/planner at the Red Deer Regional Planning Commission was a Mr. Tony Lindhout, of Netherlandish background. One day, I asked him: “Did your grandfather live in Potchefstroom, South Africa?” “Yes, for sure.” As teenager, I had known this particular Mr. Lindhout; he was in charge of the pigs at the Agricultural College at the south end of my home town. He was a widower and lived with his daughter, rode to and from work past our house on a Mobilette moped, and his son-in-law was a plumber.<sup>106</sup> I remember that around 1958 or 1959, he told my parents that he was going to visit his son in Canada, in a place called Red Deer. Tony had pleasant memories of his grandfather’s visit. “**It’s a small world after all....**”

I became involved and responsible for various “private sector” traffic planning studies and engineering designs, all over Southern Alberta (and even in British Columbia). These were a “mixed bag”, some of them small – taking a few days’ of in-depth analysis and synthesis – while others were more substantial. I became immersed in things like trip generation, traffic counts, checking if geometric requirements for the suggested road classifications could be met, and many other things. Much of this was done directly for Al Swanson, although I had to report to John Gill who signed my timesheet. UMA had the drafting staff to prepare whatever was needed for the client. Some of these studies were done directly for Developers in Calgary, like Genstar Properties Ltd., where Al Swanson did the study for North Ertton, and I handled the preparation of the report drawings. Others were for a firm called Chandler Kennedy Architects, who at one time had three proposals near 9 Avenue and 4 Street SW – one of them the “Bankers’ Hall” - it was called the Odessa Project at the time. It needed a new ramp from 4 Street SW to 9 Avenue SW for a WB-12 design vehicle, a lane intersection with 4 Street SW for SU-9 delivery trucks, and a parking ramp intersection with the lane. This was a tough assessment; the “Bankers’ Hall” project stalled for a while.

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<sup>105</sup> For the Town of Stettler, we had not yet developed an idea for the cover of the Draft Report, but for the City of Drumheller, we used a dinosaur on the cover of a number of reports. For Lacombe, we later used the Town’s crest.

<sup>106</sup> His surname was **Pat**, which is very uncommon in the Netherlands. He told us that his ancestors had originally been called **Paterson**, who were descended from a soldier who had come to Middelburg, Zeeland, in the 1580’s, with Queen Elizabeth I’s Count of Leicester.

The only time that I met Mr. Rod Sykes, already an ex-mayor of Calgary, was when he came to Al Swanson in July 1980 to appoint us for an investigation into the proposed “9<sup>th</sup> and 4<sup>th</sup> Building”, shortly to be named “**Alberta 75 Place**”, a 75 storey office building that would somehow commemorate the province’s 75<sup>th</sup> birthday<sup>107</sup>. Architect’s drawings were given to us, and this was on small parcel of land, south of 9 Avenue SW, north of the CP Railway line, east of 4 Street SW and between two railway underpasses. Our assignment was to prove – to Ron Poon, the architect, and eventually to City staff – that truck access (meaning site access and on-site turning movements for an SU-9 design vehicle) to the proposed basement, two-level parking garage and service elevators would be appropriate and approvable **from near the bottom of the existing set of 4 Avenue road and railway underpasses**. This challenge caused me to give my plastic vehicle templates some workout, as I had to align the two proposed truck loading docks with all the concrete columns and see if an average driver could “swing in or out” with a box truck, by turning its steering wheel to and fro enough times without getting frustrated and claustrophobic. On-site parking calculations (for two underground parking levels) also had to be calculated. I have a hand written Status of Work Memo (before my vacation in August 1981) with the words reminding Al Swanson: “**Letter to be written to Chandler Kennedy to say that it works.**” The City of Calgary had then already specified that on-site parking in the downtown would have a 20% small-car component (in lieu of the federal requirement of 10%.) Perhaps that was the only way in which this could be done.

However, from 2018’s GoogleMaps imaging, it is clear that “Alberta 75 Place” did not proceed at all. Instead, Gulf Canada Square expanded (doubled?) to the west, taking up part of the property, and west of 4 Street SW (right on the image **below**) is a large surface parking lot, between the two railway underpasses. There used to be a one-way road link from 9 Avenue SW to the 4 Street SW underpass, in the NW quadrant of the road intersection. 9 Avenue (and 7 Avenue) were already a one-way couplet in 1978, and I remember that from driving to church from Bowness to Inglewood – eastbound on 9<sup>th</sup> and westbound on 7<sup>th</sup>. Gulf Canada Square was the building with full size west facing mirror windows (a real novelty in Calgary).



9 Avenue SW looking east at 4 Street SW road and railway underpass, with “new” Gulf Canada Square.

The **Urban Design Group**, architects for Alta Landmark Projects, had a proposal for a large condominium project in **Coach Hill** that overlooked Sarcee Trail north of the intersection with Bow Trail. I prepared its

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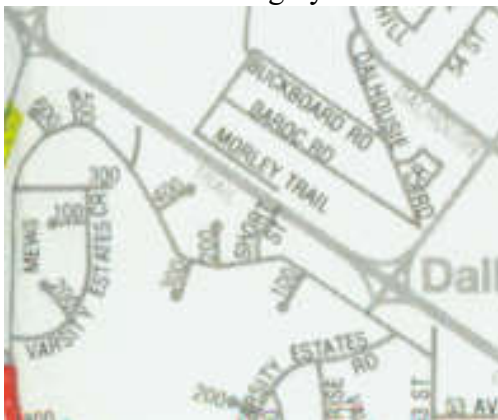
<sup>107</sup> By its approval date, not by its completion date! This was a spin-off of the Odessa Project.

Access and Traffic Circulation Study. This was a challenging project, because the on-site geometry also had to be verified. And we handled a project for **Marathon Realty**, the shopping centre and land development subsidiary of Canadian Pacific Railway that owned and operated **Northlands Shopping Centre** on Crowchild Trail and Shaganappi Trail. We had to reconfigure the parking lot around the mall building, and to improve the existing accesses to the development. This would obviously make the mall more competitive, it was thought, as it was losing market share against the larger Market Mall (which was still being expanded at the time.)



Northlands Shopping Centre, NW Calgary.

See at **left below**, where the number 7 meaning a black square is Calgary Co-Op's Centre number 7, just across the street from the Northlands Shopping Centre. The main problem, as I perceived it at that time (but obviously did not write down in my report), was that that the “anchors” – meaning the main tenants at North-lands Shopping Centre – were only “branches” of a “second tier” of retail chains, (= not “first tier” like Eaton’s and Hudson’s Bay Company) and these were sometimes merging (and then being closed down after a merger) or “getting out of business” due to some other problem unrelated to this store’s viability. Beaver Lumber was one of the main anchors at Northlands, and history shows that it merged (more than once) and is now morphed into RONA, which is the US company called Lowes. Al Swanson and I had quite some discussions on the possible future of retailing, and how important the “first tier” of anchors are to the viability of a mall. **That was then, of course**, long before internet shopping, eBay and Amazon and all the sites like craigslist. (Jumping ahead in time, I ought to mention that after my dismissal from UMA, I did some freelance work for Marathon, from home.)<sup>108</sup>



Site for the proposal for Church of the Nazarene.

Another architect-led project (similar, but one of a totally different scope and genre) was for one of congregations of the **Church of the Nazarene** that wanted to build a large edifice with all kind of ancillary rooms for all-week activities, in Varsity Estates, on the south side of Crowchild Trail, near 51 Street NW. The project architect was Mr. Rod Crocker, and the challenge was not the development itself but that the City of Calgary was at that time preparing the detail design for widening of Crowchild Trail, and this church (with its real “off-peak” peak hour traffic!) would have a strange impact on the traffic signalized intersection of 51 Street NW. Moreover, the preliminary planning for the north-west leg of the LRT system was already being prepared, (at one ITE Section Meeting, a City employee entertained us with many alternatives and some details) and would obviously “mess up all kinds of things” as it would likely run in the median of Crow-child Trail, making an intersection at 51 Street NW impossible. I believe that although UMA’s “Traffic Report” was approved by the City, the church was not built at that location, but the north-west LRT was built during the 1990’s(?). Rod Crocker had come from Atlantic Canada, and lived with his wife and some

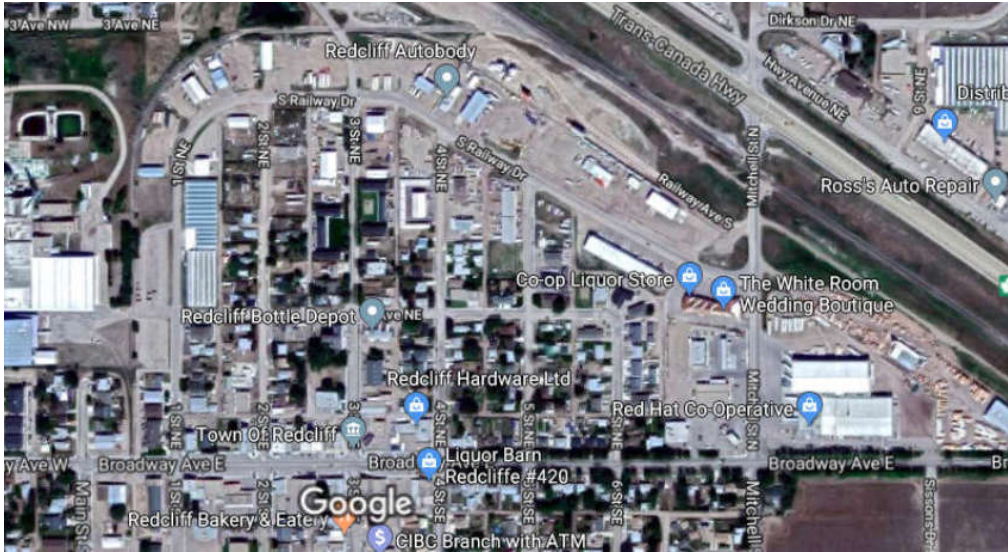
children in his own custom designed house / office within walking distance of the UMA office. Located on a wedge-shaped corner lot at the intersection of 4 Avenue and 29 Street NW; it was a very strange looking two-storey house that appeared somewhat like a boat; quite unique. I had a good

<sup>108</sup> Just last winter, the Rona store in Osoyoos closed down, after only a year and a half of operations. Two Home Hardware stores remain, the one downtown for tourists and the building materials store almost “out of town”.

report with him. During my unemployment days (see Chapter 3 below) I looked him up a few times. His practice also suffered.

After a minor involvement with a street project on the east side of the **Town of Redcliff**, that was handled by the Municipal Division, (and I think it was a subdivision south of Broadway Avenue East), I was asked to write a report for the improvement of South Railway Drive (as a **truck route** to the greenhouses and brickworks), with a cost estimate. This upgrading would likely have been similar to the “South Railway Avenue project” in Drumheller, to be funded by Alberta Transportation. At that time, Redcliff was (or felt) somehow threatened by

the likelihood of being “gobbled up” or “annexed” by the City of Medicine Hat, because their municipal boundaries were only half a mile apart.



Downtown Redcliff, 2019.

From the recent aerial imagery (at left), it appears that Redcliff’s South Railway Drive was upgraded through the curve in the downtown, and that there is now a railway overpass on Mitchell Street North, where there was a level crossing when I visited that part of Alberta in the early 1980’s. I wonder if annexation ever occurred.

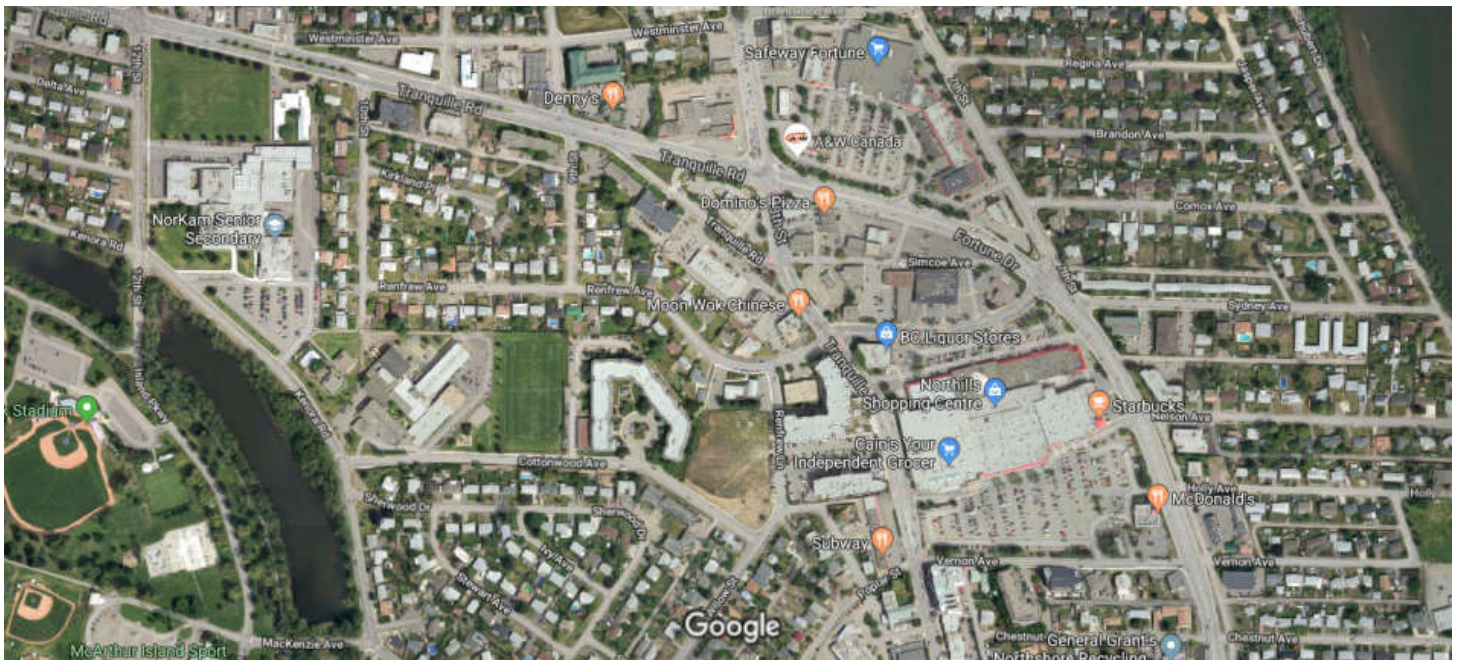
In September 1980, I joined a survey crew near Bragg Creek for a single day – and later heard that the small roadway project for that particular rezoning (or residential subdivision) had been cancelled. Applications to the Rockyview Municipal District (whose offices were in Springbank, west of Calgary) needed to be accompanied by what one calls a “Traffic Impact Study”,<sup>109</sup> and that is why I had volunteered to go out with the crew. I also did a very minor project at the housing for the cement factory at Exshaw, and a similar small study in the Municipality of the Crowsnest Pass, involving an abandoned railway right-of-way that lead to a fuel depot. And with John Hall, I did some traffic counting near (what became) Spruce Meadows, in bitterly cold weather.

There were also studies and projects in municipalities outside Calgary, and other Government agencies, even Transport Canada – see below. Another “outside” project was in Kamloops, B.C., and my input was needed for design of streets around a mall in the northwest part of that City (see next page). Situated between Fortune Drive and Tranquille Road, **North Hills Shopping Centre** could only succeed with ample parking and access driveways at appropriate locations. For this project, I reported to Don Johnson, P.Eng. in the Kamloops office.

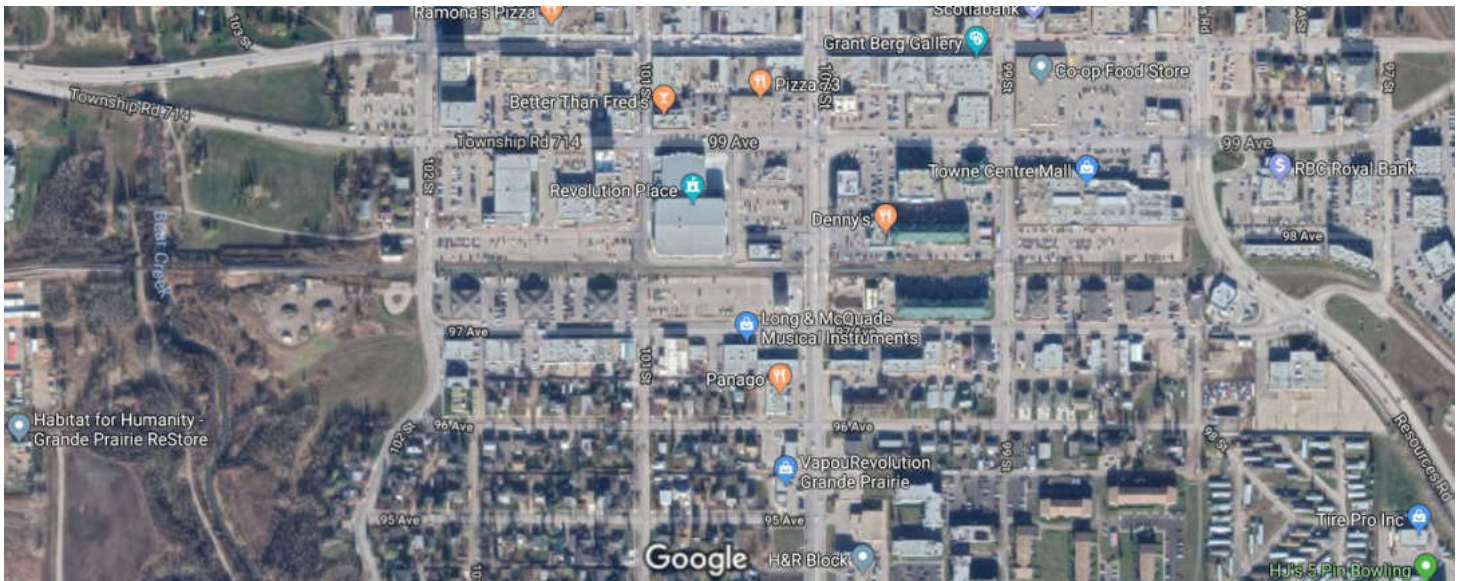
On 8 July 1981, before going on vacation, Al Swanson wrote a memo to John Gill: “The Kamloops office are preparing the street widening plans, but they may need some help on geometrics.” I did my best, knowing that there would be traffic signals all around the mall. I used an ITE Informational Guide “Guidelines for Planning and Designing Access Systems for Shopping Centers” for this. This development proceeded and serves a substantial area, as the only shopping mall in this quadrant of Kamloops. North Hills is smaller and older than the

<sup>109</sup> In B.C. these studies are required **after** Third Reading of a Rezoning Bylaw – and **after** the Public Hearing. By that requirement, the public loses out on an opportunity to comment on a Traffic Impact Study (during the Public Hearing) prepared by an applicant who also pays for the study.) This is all wrong, due to “conflict of interest”.

Aberdeen Mall, and it seems a bit “squeezed in” between the North Thompson River and the McArthur Island slough. This was an interesting project, and involved endorsing or amending drawings for sidewalks, curbing and signal locations. That I had been asked to do this work, was the result of someone who had quit UMA in Kamloops.



North Hills Shopping Centre, Kamloops, 2019.



Downtown Grande Prairie, Alberta, 2019.

A second project of this nature (see above) was in the **City of Grande Prairie** in Northern Alberta, where in 1980, **Stewart Green Properties Ltd.**, a Developer (through Ron Poon of Chandler Kennedy Architects) wanted to replace an existing shopping centre (strip mall) with a large two-storey downtown mall on a consolidated property of about three entire street blocks in the downtown (namely  $1.5 \times 2 = 3$ ) – between 99 Avenue and the railway line, east and west of 100 Street. A **100 Street railway underpass** would be required for this

scheme, and this would run underneath the mall. Quite some time and effort was put into this project, particularly trip generation and distribution, to predict how much traffic would likely go into the downtown from various directions, instead of around it, and considering the idea of making 98 Avenue a one-way eastbound roadway. We also considered other development proposals on the north side of the City. I never visited Grande Prairie at that time, but we had adequate mapping to do the analysis and prepare a report. GoogleMaps imaging of Grande Prairie now shows that this project did not proceed, and 98 Avenue is not a one-way street. I did not visit that city until many years later, and then, we only drove through.

On behalf of the **Palliser Regional Planning Commission**, a personal (written) presentation was made to the Town of Hanna, at the former's head office in Hanna, to oppose a proposal for rezoning lands (within the town



South side of Town of Hanna, 2019.

limits, see **at left**) for industrial use, between two access points to the east-west Highway 9. The proponent had EPEC Western as its consulting firm, so it was unfortunate that the meeting resulted in somewhat of a “battle of words” – on what would really be the best land use, and what would be a realistic time frame for eventual “buildout”. Mr. Paul Fenwick, MRTPI, MCIP, Director of the PRPC, had considered this development wrong at this location; the industrial zoned land was all north of Hanna’s downtown, near the existing CN railway station (on the mainline between Calgary and Saskatoon, just like

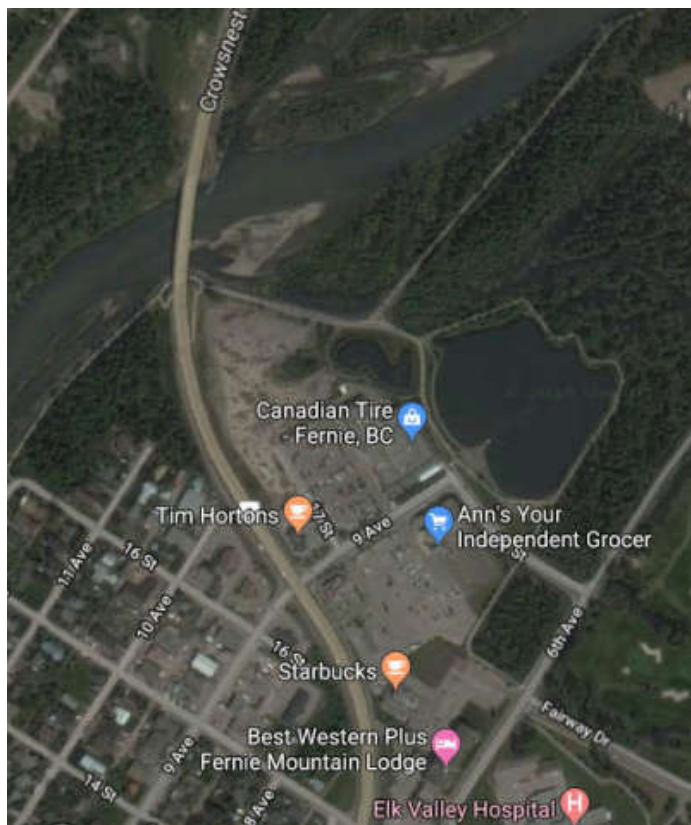
at Drumheller). But the Town of Hanna believed EPEC Western’s argument and eventually approved the proposal. Recent GoogleMaps images show that after almost forty years, the site bounded by Palliser Trail and Pioneer Trail, and by Highway 9 and the slough north of Municipal Road, has not yet filled up with industrial yards and buildings. The one large building halfway the two highway accesses (and yes, our argument was likely supported by Alberta Transportation) is a regional water treatment (desalination?) plant.

In this part of Western Canada’s Palliser Triangle, good underground water is becoming very scarce indeed. We discovered that when Lydia and I revisited the George Doupe<sup>110</sup> family south of Oyen in 1999. They had to haul drinking water from town, because their well had completely given in by becoming saline. In the late summer of 1983, they had a very beautiful vegetable garden around the house. It was all gone, a very sad situation, one that is not likely to improve!

I was sent by Al Swanson to the **City of Fernie, B.C.** in the middle of winter, for a day trip. The Highway 3 access for a proposed substantial Mall and Motel application needed to be checked for conformity to all “safety requirements”. I left home very early, and on Highway 2 near Nanton was almost swiped by a huge truck that passed my AMC Gremlin, as the blowing snow whited out the windshield. On arrival in Fernie, I paced out various distances, checked the architect’s drawings, and then just sat in my car and counted the time (in seconds) that vehicles crossing the Elk River Bridge took to reach the proposed development’s driveway location. I also noticed the horizontal curve on the old steel truss bridge structure and questioned the safety situation and sight distance. The proposed access, opposite the end of 10 Avenue (see **left on the next page**),

<sup>110</sup> I met him first as a client of WillWin Gas – see below.





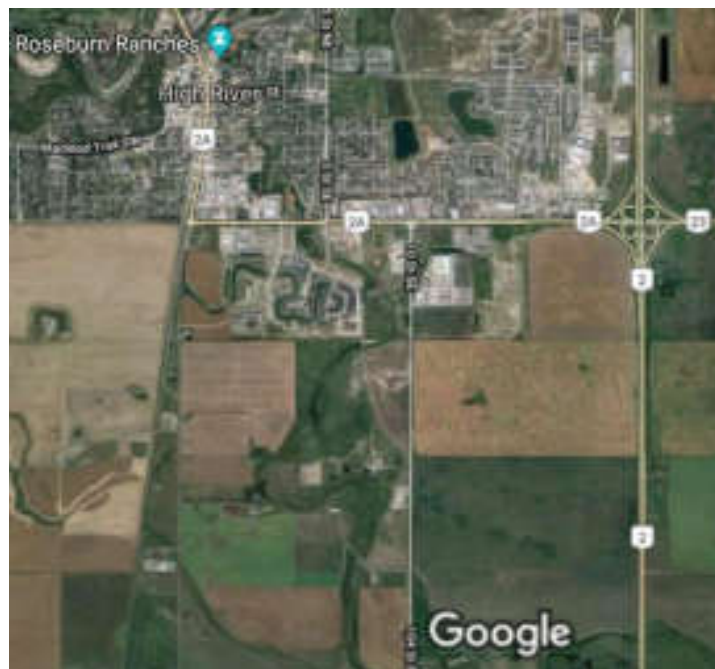
North end of the City of Fernie, B.C., 2019.

was in mind just “too close for comfort” to this bridge, and I made a note that an all-directional access at the north end of 9 Avenue would be much more appropriate. On my return, and after discussions with Al Swanson, that Mall and Motel did not proceed at that time, there is now a Canadian Tire store on the land, a signalized intersection at 9 Avenue, and a new concrete Elk River Bridge without sight restrictions. And 9 Avenue is the sole access to the development that also has an “Ann’s Your Independent Grocer.”

Cooperation with Bernie Blieske at UMA’s Planning Department resulted in the privilege to write some parts of the text of a “**transportation component**” for a few private annexation proposals. John Hall wrote other parts and Al Swanson checked our work. Shown at **left below** is one of them, south of the **Town of High River**, called **Brocklebank Estates**, of which the clients were Nanuk Engineering & Development Ltd. and Pacer Development Services. The date of the Annexation Proposal is March 1982. The area to be annexed was 203 hectares, located directly southwest of town, west of the railway line to Fort McLeod. We had all kinds of population predictions, and this annexation would allow for the doubling of the town’s 1981 population. We now know that High River’s population did



Site of Brocklebank Estates in red.



Railway line south of Town of High River, Alberta, 2019 – east limit of Brocklebank Estates, and Highways 2 and 2A.

increased (although less than Okotoks’s skyrocketing numbers) since that time, due to the proximity to Calgary, and the location on the north-south axis, which Mr. Arnold Malone’s appeal had called the **preference of**

**industrialists.**<sup>111</sup> But obviously, this annexation did not proceed, and the growth of the town occurred in other directions. Alberta does not have a “Provincial Agricultural Land Commission” like the one in British Columbia since the Barrett NDP government days of the early 1970’s. The eastern part of the annexation area proposed in 1982 is likely less prone to flooding than High River’s downtown which was flooded in June 2013. See the **next page** for a sample of the “homework” that I did – coordination.

**Underwood McLellan Ltd.**

2548 Kensington Rd. N.W.  
Calgary, Alberta T2N 2S2  
Telephone (403) 263-8881

Office of  
the Superintendent

**CP Rail**



-400, 125 - 9th Ave. S.E.  
Calgary, Alberta  
T2C 0P6

February 18, 1982  
MEMO  
8321-012-00-01

February 22, 1982

File: PAC. 14.000

The Division Engineer  
CP Rail  
1400, 125 - 9 Avenue S.E.  
Calgary, Alberta  
T2C 0P6

Underwood McLellan Ltd.  
2548 Kensington Road N.W.  
Calgary, Alberta  
T2N 2S2

Attention: Mr. Jan Kubik

Attention: Mr. J.A. deRoos, P. Eng.

Dear Sir:

Dear Sir,

Re: Proposed New Railway Crossing on Redwood Subdivision for  
Annexation to Town of High River

RE: Proposed Railway Crossing on Redwood Subdivision for  
Annexation to Town of High River

Underwood McLellan Ltd. has been retained by Beach Engineering & Development Ltd. of Cochrane, and Peacor Development Services of Calgary, to carry out the planning and engineering services in support of an annexation proposal for 3 quartersections as shown. These lands are located west of the Redwood subdivision of CP Rail and south of the Town of High River.

CP Rail has no strong objections to this proposed crossing. However, as this crossing would occur in industrial area, we feel that automatic protection would be warranted.

It is proposed to plan a new at-grade railway crossing approximately at the location shown on the accompanying Plan. This road would be a collector road serving an industrial area.

Conditions concerning drainage, visibility, etc., may be discussed later when a more accurate crossing location is defined.

Your preliminary comments regarding such a crossing would be appreciated, and any questions you may have will be gladly answered.

Your procedure now would be to make a submission for crossing approval from the CPE (Canadian Transport Commission).

Yours truly,

Yours very truly

UNDERWOOD McLELLAN LTD.

*J.A. deRoos*

J.A. deRoos, P. Eng.  
Senior Transportation Engineer

*Jan Kubik*  
for J.A. Kubik  
Division Engineer

Jed Brown  
Nilschewski  
c/o. B. L. Hlinske - 1000 Calgary

RECEIVED			
NO.	DATE	BY	OFFICE
	FEB 24 1982		

Consulting Engineers and Planners

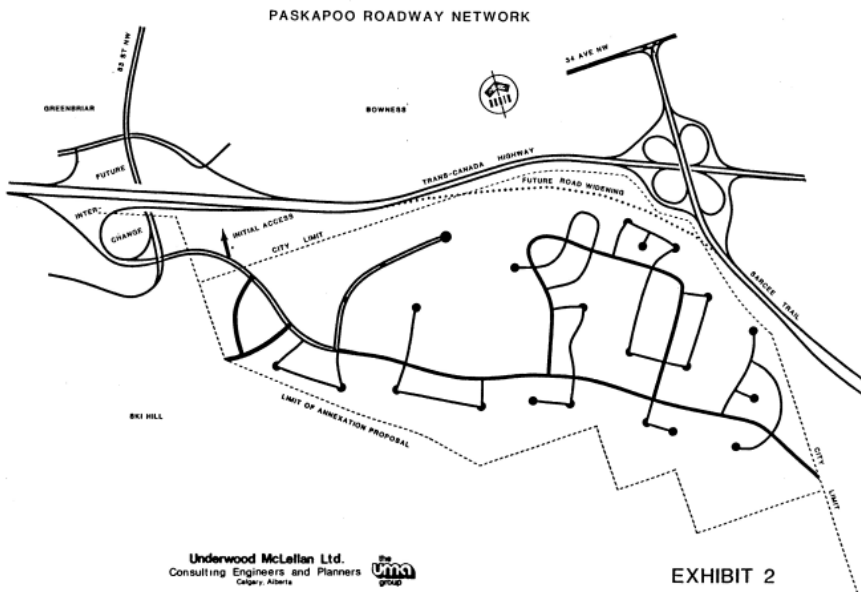


My letter to CP Rail, and their response, re **industrial rail access** to Brocklebank Estates, High River.

(When starting Grassroots Consulting Services in 1992, I applied for membership of the Canadian Institute of Planners, and asked Bernie Blieske for a reference, and he responded that he was not registered with that organization, and I got a similar letter from the City of Whitehorse’s Manager, Planning Services. But I received a good reference from Mr. Mark Hambridge, MCIP, with whom I had worked very amicably at YTG in White-

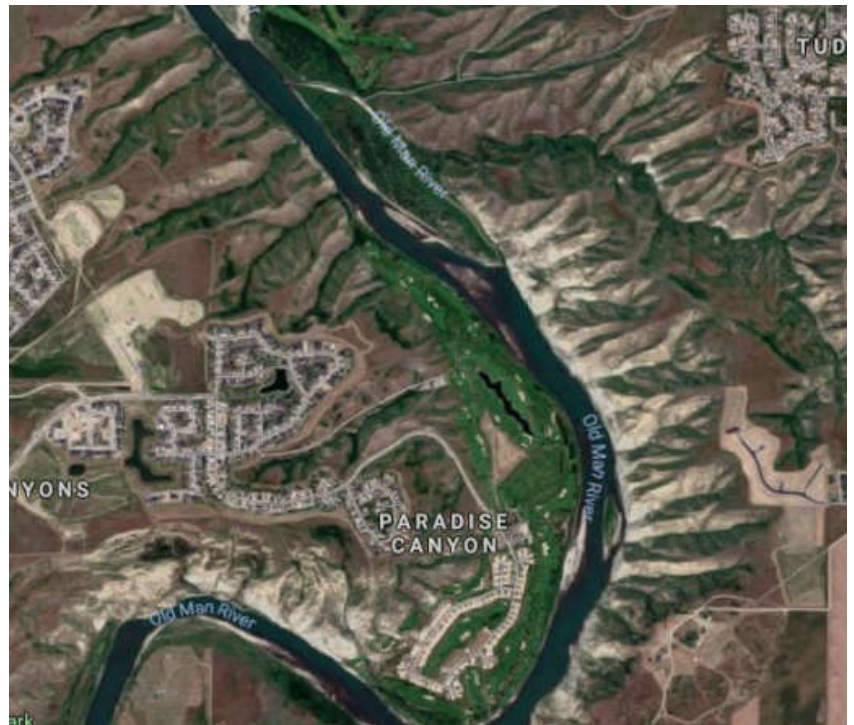
<sup>111</sup> Mr. Malone’s words were: “I would like to request that consideration be given to retaining the Stettler Subdivision because of its potential for light industrial expansion and the fact that the federal and provincial governments should be encouraging expansion on marginal industrial lands. Industrialists have informed me that it is now their preference to locate on north/south lines in Alberta rather than east/west lines. This fact was not known at the time of the public hearings.” My comments is “Why?” This was because of western Canada’s **problem-of-the-century**, the “Crow Rate”.

horse (before he left for the City of Prince George in August of 1986). As three references were needed, I then decided to join as an Associate Member of the Planning Institute of British Columbia, a worthwhile organization, and I attended their Annual Meetings in Kamloops<sup>112</sup>, Vancouver and Victoria during the 1990's.)



I also did some (minor) work on the **Paskapoo Annexation Proposal Transportation Analysis** (directly east of Calgary's future Olympic Park), for Al Swanson, who signed the report on 21 May 1981. I mostly checked that the drawings for this report were done well. The client was a Dr. Eli Scheinberg. John Hall did number crunching for this mostly residential area of 230 acres and an estimated population of 6,250. As everybody knows, that logical annexation proceeded, using the pre-existing access point on the Trans-Canada Highway (at Bowfort Road) west of where an interchange was eventually built to connect to the Northwest Bypass, which shows as 69 Street NW on the Exhibit 2 (at left). Access to the proposed ski-jump and site

for the 1988 Olympic Winter Games is shown at far left; the interchange on the Trans-Canada Highway was not even built until the 21<sup>st</sup> century.



Paradise Canyon, 2019.


◀ Proposed layout of “River Bend Estates” in the brief.

<sup>112</sup> This was the Annual Meeting with the catchy slogan “Beyond hope, but not without merit”.

In early 1982, the Planning Department of UMA prepared a “brief” for a substantial area south of a new “University of Lethbridge” that was being planned and developed. The client was Mr. a Patrick Shimbashi and its name was “**River Bend Estates**”. The site was outside the limits of the City of Lethbridge, and I drove there once with Bernie Blieske, providing input in the April 1982 cost estimate for golf course construction, utilities and roads, starting at the top on 40 Avenue West. This development (including annexation) took some time to come to fruition, but the area shown (at **left**, as in the brief, and at **right, previous page**, by GoogleMaps) is now the very posh Paradise Canyon development at the east end of 40 Avenue West, in the bend of the Oldman River, 4.5 km from the main entrance to the University of Lethbridge. The golf course was also built, but the “time share” resort at the south end (not envisaged at the time) is closer to the Oldman River as the half-acre properties on a long cul-de-sac that was originally planned. On these projects (and others) I worked less closely with Mr. George Gordon, chief planner, who had already retired when I asked Bernie for a reference.

I also became involved with two other projects, Whycom Industrial Park and Stober Land, both south of **Medicine Hat**, and a new industrial park at **Claresholm**. For the former two, I flew out to Medicine Hat with Bernie, on a triangular flight Calgary - Lethbridge - Medicine Hat - Calgary. I had expected to fly on one of Time Air’s little Irish-built Shortt planes, but it was not to be; we had their larger planes all the way. Our meeting with the client(s) was in a room at a restaurant in Medicine Hat, on the south side of one of the “signalized intersections” on Highway 1. These were later all converted to full interchanges.

Our Transportation Department at UMA was not in the still existing square brick building, but in the annex to it, (internally connected to the main building) and beside it was a separate carpet store. (On 17 December 1981, an “Office Memo” to staff described a **proposed UMA building** in the Motel Village facing Crowchild Trail across the McMahon Stadium east parking lot. That did not happen. My office, as well as those of John Gill and Al Swanson, did not have outside windows. The draftsmen were in an open area between us, without cubicles, technicians like Graham Ford and the structural engineer Larry Louis also had offices around the actual drafting area. The receptionist and typists were in the main building, who typed on “computers” that could also play “Pacman”. A special room on the main floor was converted and air-conditioned into a “computer room”, with a pen plotter for standard sheets of paper that had to be wrapped around a large roll. It was very slow, and was operated by Jim McArthur. The print shop was in the basement of the main building, and whatever they could not do in the line of printing, had to be sent downtown to a specialty firm. The planners were in the main building, as were the municipal engineers like Laurie Enns, P.Eng. and Ben De Laet, P.Eng.<sup>113</sup>



\*\*\* Current safety laws, such as mandatory seatbelt use and lowered speed limits, may be effecting a decrease in Ontario motor deaths, but pedestrian fatalities are rising. During the first nine months of this year, pedestrian deaths increased by 12.2 percent to 193 in that province compared to 172 deaths for the same period in 1977. Although no accident-cause statistics have been tabulated for this year yet, last year’s figures indicate that most pedestrians were killed while trying to cross against traffic, running on the roadway or walking on the wrong side of the road. Minister of transportation and communications James Snow is concerned that this increase in pedestrian deaths indicates both drivers and pedestrians are ignoring the basic rules of the road.

Copy of part of page 8, RTAC News, vol. 4, No. 6, Nov-Dec. 1978.

UMA’s long-time employee and legal surveyor was Gordon Schumacher, who was also (logically) licensed as a Notary Public and therefore available to his colleagues to notarize documents which Lydia and I sometimes had to submit to the South African Embassy in Ottawa, about “Tax Levy” refunds from the early 1970’s. These moneys were paid out, and we received interest on the money **when the ZAR was worth much more than the Can\$.** (even as high as ±\$ 1.84)!

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<sup>113</sup> He owned a residential side-by-side duplex, and seemed to have some problems renting them out in 1982 already.

I ought to add that I **did not do any work** on UMA's major Calgary project in those days – the **South Corridor Light Rail Project**, between 9 Street SW and Anderson Road SE. My colleagues had worked on Calgary's first "**C-Train line**", and it was under construction. I knew about the platform height controversy on 7 Avenue (SW & SE) in the downtown, and the concept of "**bedpost railings**" that was much ridiculed by the Calgary Herald. I had not given up my interest for pedestrian safety, and my views around the coffee table at the NITRR (see Chapter 3 of Part 2) were substantiated in the **article on the previous page** about the situation in Ontario. For many years, I have kept a folder with all kinds of newspaper and magazine clippings about this topic. Where possible, I brought up pedestrian traffic safety in my reports.

I also kept up my interest in traffic noise, which I have come across often since my Seminar subject in 1965 (See Part 1). In South Africa, Lydia's father had been the chairman of the **Van Tonder Committee** (about aircraft noise around airports, as an urban planning tool) during his post-municipal career. His Memoirs show one graph that is not unlike the one **shown at right**, for Edmonton Municipal Airport, in 1977. I found this in a report titled "Public Hearings on Noise in Alberta - Report and Recommendations" by the Environment Council of Alberta, 1982. I wrote for my personal copy based on an article in the Red Deer Advocate of 1982-08-24. The approach was different than the one in the South African study: This had more to do with getting existing problems fixed ("reactive") than with being "proactive" about developing guidelines for future residential development. Later (likely at the 1985 ITE Conference) I heard a presentation about all kinds of noise protection proposed for the Whitemud Freeway in Edmonton. None of that had even been thought for Deerfoot Trail! That is how things had already changed in a mere decade.

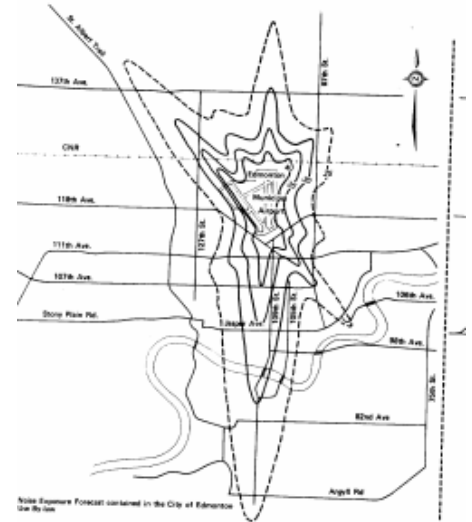
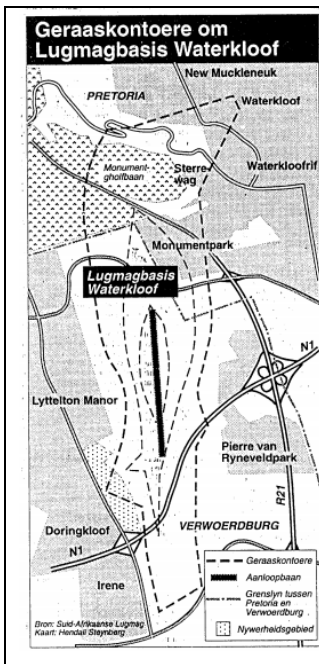


Figure 1. Noise Exposure  
Source: Matson 1981

**Excerpts from pages 61 - 63 of "Memoirs van Johannes J. van Tonder, sedert 1910" written in 1992.**



After a few months, (*in 1967?, JAdR*) a request came from Dr. Van Niekerk of the CSIR, that the Department must take the lead in establishing "noise limits" for the airports as well as for roads and buildings. It became a comprehensive task with about 20 participating bodies, which I chaired. A splendid copy with highly scientific information has come to light and both the State and the Provinces have approved it. Dr. Rautenbach<sup>114</sup> was very pleased.

The report meant that large areas around airports were "sterilized", so that any suburbs within specified distances from the runways were prohibited. The decibel limits of sound were laid down by law across all airports and the sound limits on major roads were also determined.

This exercise was carried out at the time, while the open spaces have not yet been occupied by townships. The scientific calculations are generally accepted worldwide as a norm for international use. The report is available in all scientific libraries. Dr. Van Niekerk, the specialist in this field, died at a relatively young age in 1992.

After 22 years, the noise incidence is currently being reviewed. **{Note: In fact,**

<sup>114</sup> As translated from Afrikaans. Dr. P.S. Rautenbach was the (Central Government's) Secretary of Planning.

the work had already been recognized by inserting a definition in the legislation and regulation:}

**ENVIRONMENT CONSERVATION ACT 73 OF 1989**

*(Gazette No. 11927, Notice No. 1188. Commencement date: 9 June 1989)*

**NOISE CONTROL REGULATIONS**

*Published under Government Notice R314 in Government Gazette 13029. Commencement date: 22 February 1991*

**DEPARTMENT OF ENVIRONMENTAL AFFAIRS**

**“noisiness index”** means a number expressed in dBA as defined in SABS 0117-1974, titled: “Code of Practice for the determination and limitation of disturbance around an aerodrome due to noise from aeroplanes”, published under Government Notice No. 151 of 1 February 1985;

The Project Manager for the City’s first LRT project was **Spantec Limited**, and the Urban Transit Group consisted of **Underwood McLellan (1977) Ltd.**, **Deleuw Cather Canada Ltd.** and **IBI Group**. Spantec was a company affiliated with UMA, at the same address.<sup>115</sup> UMA had designed the **Macleod Trail Grade Separation (Phase One)** – a very skew bridge directly south of Heritage Drive. My set of “Issued of Construction” drawings September 1979 is signed by K.L.L., meaning **Larry Louis**, P.Eng., the structural engineer. These drawings were signed and sealed by **John W. Gill** (civil), Ben J. De Laet (utilities) and **A.S. Washuta**, P.Eng., (retaining walls and piling); all approved by K.L.L., and the profiles of the detours show drawn by G.R.W. meaning **Geoff Williams**, and E. MacC., meaning **Ewan McC.....** checked by B.J. De L., meaning **Ben de Laet**. I do not recognize some other initials like (drawn) P.L., B.R., B.R.M., U.G. and (checked) R.S. Graham Ford (also an ex-South African) was one of those responsible for construction supervision on the LRT project. The C-Train project was officially completed on 25 May, 1981, and every UMA employee received a letter from Mr. Denis Cote, P.Eng. with a **“free Commemorative Pass which is valid until May 31, 1981.”** That day, I took Joss and Sara for a trip down to Anderson Road Station, taking pictures along the way of this brand new mode of transportation.

**Johan Moelich**, P.Eng., was a South African electrical engineer at Spantec (not working in the UMA building) in Calgary. He had first worked in the Winnipeg office, and he lived with wife and children in NE Calgary. We had some contact, but they did not stay long in Calgary. With the crunch of 1983, they moved to Ontario, where he became a Project Manager for high-rise buildings in Toronto, and lived in Oakville.

**Dwight Carter** (Transportation Engineer in Red Deer) left UMA (temporarily) in mid-May 1981, accompanying his wife (who was a teacher) on a few years’ work in a developing country. Before leaving, they visited us at our home in Lakeview. He had done much design work in Drumheller and Red Deer, and his memo of 11 May 1981 outlined all that – as **“Current Status of Projects on Which I Have Been Involved”**. He had written the computer program called UMA-ESA, for John Gill, (who later somehow claimed authorship). Designing by digital instead of analog methods was a hot topic in those days – just about every consulting firm in Calgary was developing its own in-house programs to calculate earthwork quantities, and much more. Geoff Williams had helped Dwight and was able to use the program. Within a year or so, the industry coalesced into an American program called McAuto, which the Provincial governments adopted as a requirement.

In April 1982, during the nice get-together described **below**, the complete Calgary branch staff of the Transportation Department consisted of 15 people: Transportation Director: H.A. Swanson; Transportation Department Head: J.W. Gill; Senior Transportation Engineer: J.A. de Raadt; Senior Transportation Engineer: W.W. Wil-

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<sup>115</sup> I do not want to get into an argument whether this situation could or should be considered a **conflict of interest**, because Spantec Limited was a company within the UMA Group of companies.

liams (Red Deer); Senior Transportation Planner: J.A. Hall; Project Engineer: B. Dowdall; Transportation Technologists / Technicians: L. Rice; Draftsman and Construction: M. Vrabec (Medicine Hat), G. Ford, G. R. Williams, K. Meldrum, B. Malloy (Drumheller), D. Courtice (Red Deer), T. Wawrzyzyk and G. Labonic. It seems that “Big Al (Banks?)” was no longer with us, and that also Ewan MacC... had left. (He was the one who ordered cod from Nova Scotia and sold it to his colleagues, and also to the Newfoundland Club that had its office in a house a few blocks east of the office.) Teresa and Gabriela were wonderfully efficient draftsladies. (Teresa and her husband had escaped from Czechoslovakia with hand luggage on a weekend trip to Yugoslavia, from where they had escaped to the “west”, knowing that everything they had left behind would directly be confiscated. Gabriela had come from Quebec.)

On 15 and 16 April, 1982, many employees from all branches came to Calgary for the UMA Group April 1982 Meeting. On the 16<sup>th</sup>, the Transportation Division met in the Lake Louise Room of the Westin Inn, where John Gill had two presentations, one on “Computer assisted drafting and design” and one about UMA-ACE. Branch Reports followed from the B.C. (= Burnaby + Kelowna), Calgary and Edmonton branches, and then Norm Light-foot spoke about CADD and a MEDUSA program. At 11:30 all of us hopped on the C-Train down to South-land Station for lunch at the Hospitality Inn South. On our return, Branch Reports of the Transportation Divisions of the Saskatchewan, Winnipeg and Toronto followed, and after some technical presentations, Mr. Gerry Smith from Winnipeg discussed divisional organization: UMA would find an Eastern Region Transportation Director, and review a future “Urban Transit Group”. On the next day, I attended my first (and only) hockey game ever, when UMA Edmonton thrashed UMA Saskatoon (or the other way round) in the Jim Bell Arena. Twenty-two people had attended our group meeting; I was asked to write the formal Minutes.<sup>116</sup>

Calgary

**INTER OFFICE MEMO**  
Underwood McLellan Ltd.

TO TECHNICAL SESSION PARTICIPANTS      DATE April 21, 1982

FROM GERRY SMITH, DIRECTOR

RE

With regard to our technical session in Calgary, I am requesting the comments of all participants with regard to the suitability of the session to meet individual needs, the format and contents of the sessions, suggestions as to how it might be improved, etc. I am also requesting honest comments as to how the sessions can be made more worthwhile, so please respond.

Also it would be appreciated if the response could be as early as possible, say by April 30, 1982 while it is fresh in everyone's mind.

I would specifically request Geoff Williams, Kevin Meldrum, Graham Ford and Larry Rice to make comments to ensure that Branch staff at future sessions who do not regularly attend the sessions, have an opportunity to participate and to benefit from the sessions.

*GS*

GAS/cek

TO: MR. GERRY SMITH UMA WINNIPEG		FROM: JACOB DE RAADT UMA CALGARY	
SUBJECT: COMMENT ON TECHNICAL SESSION		REFERENCE:	DATE: 1982-04-28
MESSAGE:			
<ol style="list-style-type: none"> <li>1. I enjoyed the session (my first) but found some overlapping between the individual presentations and the branch reports.</li> <li>2. Maybe the individual presentations should be blended into the branch reports - this would save valuable time.</li> <li>3. The lunch break was too long (wait for LRT) but on the other hand, gave out-of-town people a great opportunity.</li> <li>4. Coffee breaks could be done without - instead, everyone can get his coffee or tea during presentations (without disturbance).</li> <li>5. Norman Lightfoot's slide show was too rapid to grasp completely.</li> </ol> <p>I liked writing the minutes.</p> <p style="text-align: right;"><i>Jacob de Raadt</i></p>			

◀ Gerry Smith asked for comments, so I gave them. ▶

It had been a very big and wonderful meeting indeed. Unfortunately, within three weeks, all staff members received a letter from Mr. Walter Tapuska, P.Eng. (see next page) about an immediate restraint program. I am not sure to which extent this letter was taken seriously by my colleagues (or by me). What I do remember is that at home, we already braced ourselves by saving instead of spending; Lydia did a very admirable job, and our four children also accepted this. In the office, it sometimes became difficult to put “honest billable hours” on my timesheet, to whatever client I was working for. Having worked in the “public sector” before, I realized that something was greatly amiss. I was sometimes still very busy, but some projects were cancelled and new ones

<sup>116</sup> John Tuck, P.Eng, from Winnipeg was there. In 1990, I met him again, at Chatwin Engineering in Nanaimo, B.C.

**just did not come.** On 10 May 1982, Jim Pyesmany of the Edmonton office asked John Gill (**by Telex!**) for “information on the earthworks program in suitable format ... a couple of pages at most” for his written submission

INTER OFFICE MEMO  
Underwood McLellan Ltd.

TO STAFF  
FROM W. A. TAPUSKA  
RE

DATE May 3, 1982  
OUR FILE NO

As a result of the April meeting of the Board of Directors of UMA a plan for a restraint program will immediately be put into place for all operations of UMA.

This move is deemed necessary in view of the deepening recession in Canada and the U.S. Economists are suggesting that this recession will continue for the balance of 1982 and probably 1983.

The Calgary Region operation of Underwood McLellan Ltd. has currently an adequate work load in most departments despite the fact that we have in recent months experienced cancellation of major projects by Union Oil, Panarctic Gas and three land development companies as well as a number of smaller projects.

As a result we are now budgeting for a level of activity less than we had anticipated at the start of the year.

Accordingly we must impose an attitude of restraint in all facets of our operation and particularly in the following:

“**to CN regarding tunneling and other expertise**”, and he wanted it by 13 May 1982 (!)<sup>117</sup> John asked me to write this, and my two-page write-up on all the capabilities of the UMA-ACE program (**as if I would know this!**) received almost no revisions from him. (Ironically, this happened while my brother Arie worked at “Osborne” in Oakland, California, USA, a division of McGraw-Hill), translating computer books from foreign languages into English, and the other way round.) I sent this write-up to Jim Pyesmany on 12 May 1982. I never used the program, but

was sometimes very busy with what was called “spaghetti engineering”, meaning conceptual work by placing black strips of tape on oil-skin paper sheets to show some alternatives of what might become one or two workable solutions to a problem situation. Whether that enhanced critical thinking with its recipients, I do not know, but it shaped my mind. Al Swanson was a strong supporter of this way of thinking.

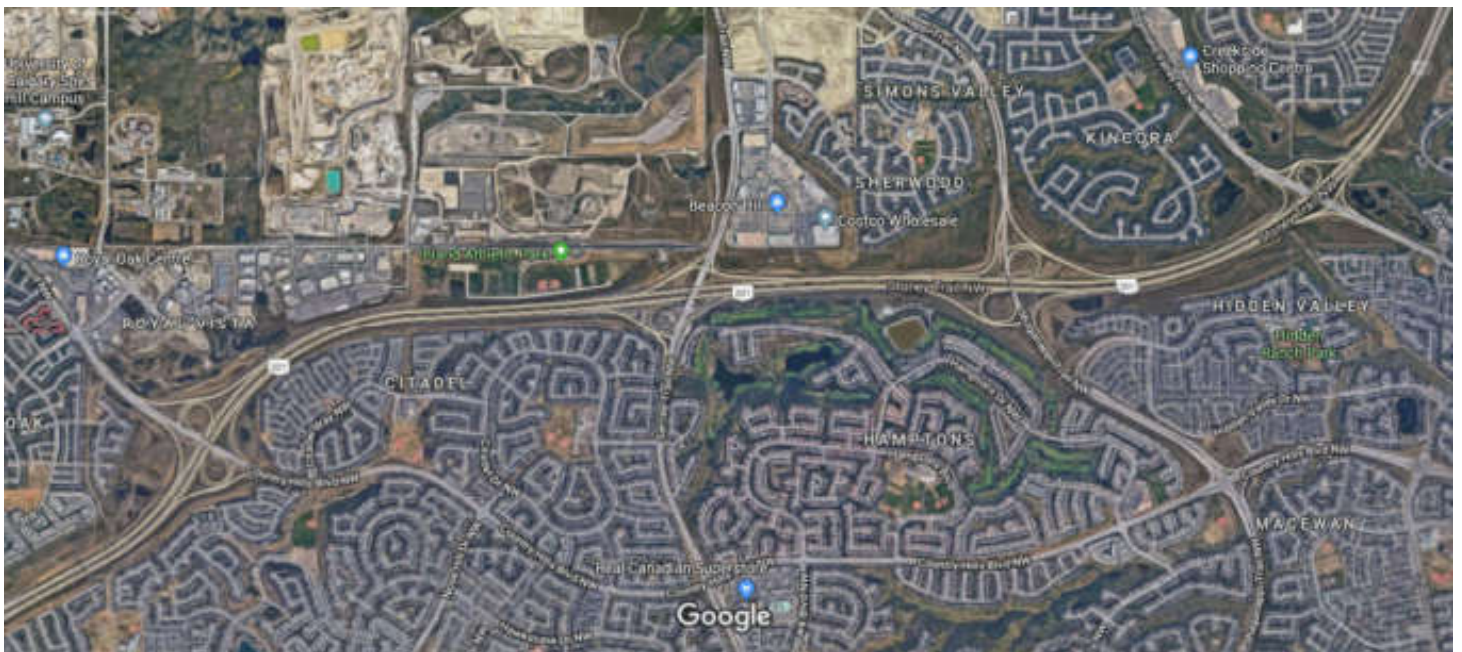
On some projects, we had already used UMA-ACE for calculation earthworks quantities before 1982. One of them was the **Report on Northwest By-Pass**, submitted to **Menno Developments Ltd.**, in October 1981. One of their subsidiaries, Sterling Real Estate (Calgary) Ltd., owned land in an area where Alberta Transportation’s Operational Design Branch (Edmonton) had already developed a “preferred” preliminary alignment of the Northwest By-pass, near the Calgary Spy Hill Sanitary Landfill. Our investigation started at a **proposed Beddington Expressway**, crossing 69 Street NW and a proposed extension of Shaganappi Trail, and ended at the existing Simon’s Valley Drive, for a length of a 4.5 km. The province’s “preferred” alignment’s Transportation and Utility Corridor would sterilize **23%** of Sterling’s property, as well as land within the “**Aldergrove annexation proposal presently being prepared by Sterling**” and others. We were asked to study alternative alignments that (1) would not sterilize land, and (2) would meet all the geometric design standards, with future interchanges at appropriate locations, complete with earthworks quantity estimates. We derived two alternative alignments, called “B” (from the province’s original “A”), and “Q” (from the province’s preferred “P”). Line “Q” ran east-west, parallel to the section line, and “simply tried to remove the service road, pipeline and distribution strips from the client’s property”, as Alberta Environment had indicated that these were not critical west of the client’s property, where the landfill site was. It therefore ran within the original corridor, which had been moved by ½ mile with the “preferred” alignment. We proved that this Line “Q” would result in 1,575m with a maximum grade of 5.05%, while Line “P” had 775m with a maximum grade of 6.0%. “Line “Q” would be the cheapest to construct, because it had the least excavation and the second lowest difference in grades. This is also borne out by the mass haul diagram of Line “Q”, which indicates a far less amount of overhaul and fairly close haul points than mass haul diagrams for the other lines.” Investigating the best location of an interchange, it was suggested that it would be “desirable to shift the alignment of Shaganappi Trail eastward by about 270m (from what had been shown on Line “P”) “to obtain better grades and less earthworks on the interchange ramps” – and that the location would be marginally better on Lines “P” and “Q” than on Line “B”, be-

<sup>117</sup> O yes, we had a telex, but to my knowledge, it was very seldom used.



cause of the influence of the coulee in this area. (This was in rough terrain on the northwest side of Nose Hill.) Further to a meeting with the City Transportation and Planning Departments, we were asked to also develop alternatives for a **Route Location** of a northern extension of the “proposed” Sarcee Trail north of the Northwest By-Pass, and we complied by providing three alignments. This was due to the City’s agreement with the Municipal District of Rockyview. Of these, “Line 1” was not possible due to excessive grades for the UAD 70 requirement with 5% maximum grades, and “**Lines 2 and 3 are both feasible, although Line 2 would be easier to construct and would have shorter lengths of 5 percent grade and less, although still substantial, excavations and embankments.**” We took liberty in extending this alignment on our drawings to Secondary Road 772, which is of course Symon’s Valley Drive. The contact person at Menno was Mr. Ed Daskalchuk, P.Eng., Land Development Manager, and he was very happy with the report.

My report of 2 October 1981 includes two long strip maps at a scale of 1:5000, but I never thought to compare these alignments with what was actually built on the Northwest Bypass and Shaganappi Trail. I know that the project proceeded very slowly due to economic situations in Alberta; it is now possible to see that something approximating Line “Q” was built, where Highway 201 (Stoney Trail NW) runs east-west, south of the landfill site. In fact, 122 Avenue NW is built on the section line, north of it was Stirling’s land. Line “2” (Sarcee Trail NW) was built east of the landfill, and then west in the Nolan Hill neighbourhood, up to 144 Avenue NW, which does not connect to Symons Valley Road NW. So perhaps my efforts came to fruition. (See **below.**)



Highway 201 as it passes by the south side of the Spy Hill Sanitary landfill Site – and further east.  
The names of all the neighbourhoods are clearly shown.

The second project in which we (or actually Geoff Williams!) used UMA-ACE was for a **Coal Conveyor Berm** at **McIntyre Mines Ltd.**’s coal mine near **Grande Cache**. We met the mine owner’s representative in a Calgary office tower and made our pitch for what UMA-ACE could do. We were then given the mapping and details of the location of this new conveyor belt, from where it would exit a proposed (or existing?) almost horizontal tunnel. The berm had to run from the tunnel exit to the railway station, where railway cars were to be loaded. Geoff hand-digitized the mapping, and off we went. We prepared the design and a cost estimate. I cannot remember if we did the detail design for the project; perhaps the Edmonton office did. Obed-Marsh likely resulted from these marketing efforts (see below), but that was for another client.

On 7 May 1982, I received a letter from Rupert Kirk at UMA's sub-office in Dawson Creek, (falling under either Edmonton's or Kamloops' jurisdiction?) with various memoranda about Petro-Canada's Monkman Coal Project, near Tumbler Ridge. It dealt with the Province of British Columbia's preference for the Barbour Creek relocation of the Kinuseo Falls Road (over the shorter Hambler Creek and Flatbed Creek alternatives), and that Petro-Canada "could not consider this alternative unless the Province funds the difference in cost between this route and one of the shorter routes." But that never was our project; UMA only dealt with one project in the area, the **Upper Sukunka Railway line**, with a preliminary cost estimate to **BP Exploration Canada Ltd.** This was an exciting proposed **electric railway** that would run in two long tunnels (one up and one down) and a small switching yard in the narrow valley between the two mountain ranges that would be tunnelled. This line would run between an already proposed railway along the Sukunka River south of Chetwynd, straight to Tumbler Ridge. I saw the preliminary reports of those two railway lines, but I know that Tumbler Ridge was a mining town in the 1990's and the coal must have come to the west coast (by train, or first by road to Chetwynd?) But because Petro-Canada's project was cancelled in 1982, the whole idea of those two railway lines was completely abandoned.

I should write something more about **John Arnold Hall**, P.Eng., who assisted me in various ways and he assisted me as well. I do not know exactly when Al Swanson hired him, but it must have been in 1981. He was permanently taking graduate courses in transportation at the U of C under Dr. S.C. Wirasinghe, for an eventual Master of Engineering Degree. Originating in Great Britain, he had worked there and for the bus system in Hong Kong. When he and his wife Frances and four daughters came to Canada via the USA, they entered British Columbia by the Black Ball Ferry in downtown Victoria, where he knew there was an office to become a landed immigrant. That shows the kind of person that he was. At the U of C, he wrote three excellent term papers – I have a copy of the third one – and these are titled:

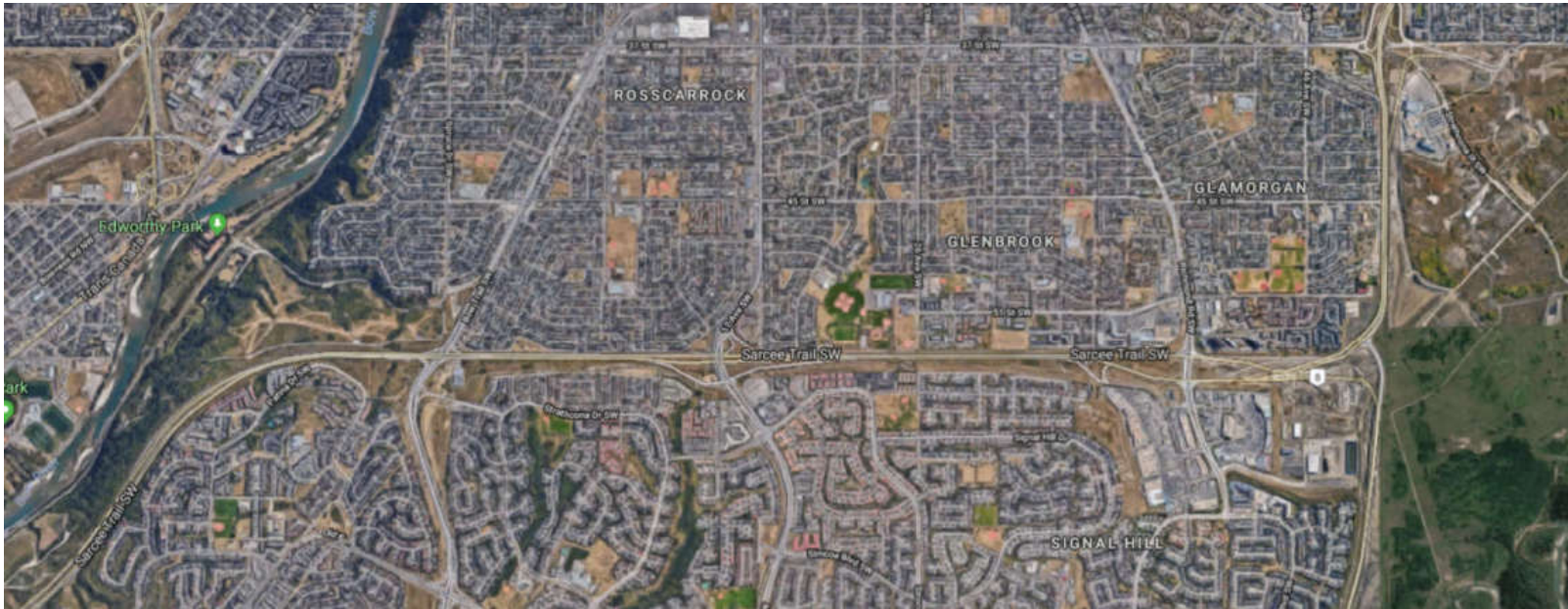
- Transportation - Land Use Aspects of Calgary's Growth – A social City Concept – December 1981.<sup>118</sup>
- Commuter Transit Potential in the Calgary Region – April 1982.
- Calgary L.R.T. – Operational Management to Overcome Grade Crossing Delays – April 1982.

At work, he did a lot of "number crunching" for the transportation planning studies that UMA had in Calgary, and particularly the Homesteads annexation proposal, in what later became the huge "Mackenzie Neighbourhood". I once took him out to the site (he did not own an automobile!) on the highway directly south of Calgary, now called Highway 22X, and we had a high class conversation on traffic matters. John Hall also did a lot of writing, and probably had a photographic memory. John and Frances lived in a duplex in Forest Lawn. He was a "train geek" and member of the Canadian Railway Historical Association. When the idea of a railway museum and / or "Heritage Train" in the Drumheller area, between East Coulee and Drumheller, a distance of **21.6 km** (13.5 miles according to a former CN Timetable) was conceived (**by both of us**), he enthusiastically grabbed hold of the concept, based on his knowledge of similar situations in Great Britain and the availability of all kinds of rolling stock in Canada. After writing the "**Heritage Train Proposal For Drumheller**" to the City, he also wrote an addendum on 25 June 1982 in a letter to Ray Romanetz and Alderman G. Ross, with a c.c. to Al Swanson, John Gill and me. I assisted him with my (limited) knowledge of the railway museums in Cranbrook and Fort Steele, B.C., and both of us obviously knew the (fakish) circular track at Heritage Park in Calgary. In early September, we both had an opportunity to address the City of Drumheller Council, where we stressed the tourism potential, particularly because the nearby Dinosaur Provincial Park had been declared a

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<sup>118</sup> In the fall of 1981, Al Swanson presented a paper "Cities Within a City" to the local ITE section meeting. In the Bibliography of his second paper "The Relevance of Cities Within a City for Calgary's Future" (as Transportation Director, Western Region, for Underwood McLellan Ltd., April 1982), he mentioned John Hall's paper as "Unpublished, University of Calgary Term Paper, December 1981." The question might actually be asked: "**Whose idea was it first?**"

World Heritage Site, the Tyrrell Museum had already occupied their new buildings, and Century Coal would be able to continue guided tours into the defunct coal mine. Situations like this abounded in Europe, John said, and this would be an opportunity for the City. But the response in the Council chamber was not encouraging, to say the least. Obviously, the City of Drumheller only saw the side of the coin that we failed to see. Nothing happened. Within a few weeks, I was laid off, and a few months later, John Hall was also let go. On a touchy topic, it is quite possible that his love for alcoholic beverages already exhibited itself at that time, and that this was a more important reason for his dismissal than a lack of work for him. I knew (and we all knew) that he sometimes went out for a drink in downtown, with City staff – supposedly for work purposes? “It was the worst of times...” But in 1986, when asked by Mr. Doug Campbell, P.Eng., I recommended that the Government of Yukon hire him as an excellent worker, although I mentioned my concerns about one serious flaw.<sup>119</sup>



◀ North                                      South Strathcona (= the area west of Sarcee Trail).                                      ▼ To Bragg Creek.

But I am not yet done with what also happened during the year 1982 while I worked at UMA in Calgary. Through Al Swanson (who had his political ear on the ground and did the marketing), John and I became involved in the **South Strathcona Transportation Plan, including Highway 8 realignment**, a.k.a. “**the battle of the shopping centres**” west of Sarcee Trail. The City was already planning a “west” LRT line (which now exists) that would run straight west along 17 Avenue SW,<sup>120</sup> until overpassing Sarcee Trail. Developers were obviously planning to build a mall at its west terminal – where nothing existed at the time. Two other developers were also planning to build a mall, one at each of the other traffic signalized intersections on Sarcee Trail, namely Bow Trail and Richmond Road. Bow Trail becomes Old Banff Coach Road, and Richmond Road goes straight west, almost to Bragg Creek (it was not called Highway 8 at that time), while 17 Avenue SW actually ... goes nowhere. Our client was **Trizec Corporation Ltd.**, promoting its proposal to be approved first – so that the others would then not be allowed.<sup>121</sup> Hudson’s Bay Company was one of the “anchors” for the mall

<sup>119</sup> John Hall was hired by YTG, and that was a culture shock for him. He was laid off there, before I left Yukon. In 2019, he was still in Whitehorse, according to an e-mail that Stuart Drummond sent me. (See Part 4 for more, D.V.)

<sup>120</sup> The City had already prepared preliminary layouts for it at the time. Directly west of 45 Street SW, in Westgate, a strip of land for this line had already been acquired, directly south of the Calgary office of the Alberta Motor Association, (which I found quite ironic.)

<sup>121</sup> Overbuilding commercial areas had already shown up as a problem at that time in Alberta. The Town of Innisfail became a classic example, where **three out-of-downtown malls** were approved and built, and the down-town died. With

proposal that UMA became involved with – and the Developer had an “Afrikaans speaking South African” project manager called **Dirk Opperman**, who had fairly recently come from Toronto, and I once met him on site and also met in his posh office a few times.

I did some “number crunching” on trip generation and “route allocation” for Al Swanson at the time, based on the development proposal of Trizec’s whole section of land (did they already own it, or only have options?), bordered by Richmond Road, Sarcee Trail, 69 Street SW (which was the City limit) and a section line. John Hall later became much more involved. Directly south of Richmond Road was another possible development site. Nothing much happened with those proposals during the 1980’s, but eventually, Alberta Transportation decided to build Highway 8 and abandon Richmond Road west of Sarcee Trail. A large commercial area now exists on this site, its potential augmented by nearby townhouses. I do not think that something of the same scale was built at Bow Trail SW or 17 Avenue SW.



Southland Drive LRT Station, 2019, showing a pedestrian overpass of the C-Train, at Southland Drive SW.

Another Developer, **Norlin Properties Ltd.** required a “**Feasibility Study on Walkway to Norlin Place**” (one that would link their proposed office tower (north of Southland Drive SW, east of the tracks) to the Southland Drive C-Train station). In the mind of the architect was a covered pedestrian walkway, **over** the LRT and CP Rail tracks, and then **under** the (newly built) Southland Drive SW overpass over both sets of tracks. My report of 25 May 1981 (with some hand drawn sketches of walkway widths and grades (and stairs where needed), all according to the City of Calgary + 15 Design Guidelines, dealt with all the possible issues, proving the engineering feasibility of the concept, with a preliminary cost estimate of \$ 1,350,000. The walkway would also serve

the “Fluor Canada” building excellently. (My report is unclear on whether this was an **existing** or **proposed** building.) Recent GoogleMaps imaging (**above**) shows that this “**Proposed Norlin Place**” was not built, and that there is a pedestrian overpass between a parking lot west of the C-Train station and the Alberta Health Services Senior Health Calgary, but not opposite the C-station elevators to what seems to be a parking garage. Which makes me think: Did the **Fluor Canada** building ever exist where the parking garage is?

A strange assignment came to us from the **Calgary Real Estate Board**. They told us (“but keep it a secret!”) that they wanted to get out of the downtown, and we had to assist them by providing a transportation study for **four alternative sites for their new Main Office** – a pre-selected one in each of the city’s quadrants. Accessibility (for automobile, LRT, even buses and pedestrians), on-site parking, all had to be analyzed in a matrix. I was not much involved with this project, except obtaining various base plans at Rocky Mountain Plaza, for the specific sections where these secret sites were located. John Hall had just been hired by Al Swanson, and this may well have been his first assignment. The site with LRT access obviously won out, a site almost directly east of Chinook Centre, very near the **Chinook Station**. I do not know if (and when) the Calgary Real

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the recession, it was found that one mall had an occupancy rate of 80%, another one had 50% and the third one had only 20%. And the downtown still died. In British Columbia, the City of Nanaimo became notorious for having too many malls and strip malls along Highway 19.

Estate Board moved, and if the UMA study was considered in their decision making process. Isn't it always a realtor who states "**Location, Location, Location**"?

An interesting "**Traffic Study at the Calgary International Airport**" was prepared for Transport Canada – with a two-fold additional purpose – meaning that it was more than a traffic study, because it included:

- Preliminary design for the upgrading of Barlow Trail NE, (in 1982, the main entrance to the airport).
- Preliminary design for a new staff parking lot to serve Pacific Western Airways (PWA) employees at a specific location at Calgary International Airport.

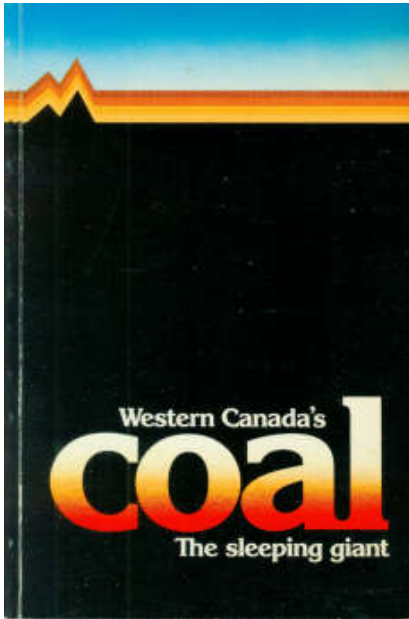
Initially, this was not really my project in January 1982. I had not been involved with the Proposal nor the "few problem areas" with it, as discovered by Ken Buchner in a "Business Development Won/Lost Report" of 21 January 1982. He wrote: "Of five proposals, we were the third highest in terms of fees. (The clients) also were impressed with the quality of personnel assigned to the project." There had been two addition errors in the fee section of the proposal amounting to \$ 1,800 in UMA's favour; the total fee had been adjusted to \$ 34,900. The (federal) client obviously wanted a "top notch" report. John Gill did much of the work; I assisted with writing some paragraphs about the future of Barlow Trail NE, and directing the preparation of drawings. PWA was a provincially owned airline that operated with only Boeing 737 aircraft, while CP Air and Air Canada were competing with larger, older and multiple types of planes. PWA had staff in Calgary and wanted a staff parking lot from Transport Canada, (which was supposed to be unbiased, but remember that Air Canada was a federal crown corporation). It was known that a "second runway" would eventually be built parallel to the existing main runway, and east of Barlow Trail,<sup>122</sup> so that whatever was proposed, would become "temporary" or "for the medium term". But the date of this additional runway was too unknown, and the asphalt on Barlow Trail was falling apart and had major drainage problems. A City owned industrial / commercial subdivision at the south end of Barlow Trail also needed to be considered, and I spoke to the City Land Department staff several times; they were not in Rocky Mountain Plaza. The proposed staff parking lot for Alberta's own airline (compared to CP Air and Air Canada) was next to a part of the airport building that was "a natural choice" – and a traffic signal was also proposed at its exit road. PWA was at that time still up-and-coming and was also building a servicing hangar that could handle a Boeing 737 – which was the only plane this company owned. One of our ITE Section meetings was an evening visit to the almost completed PWA hangar which was really hi-tech, and the trip was a great success.

But John Gill had written a **draft report** (with a number of drawings and exhibits) and had submitted it to Transport Canada at the Airport, before going on vacation to Australia. One day, Al Swanson received a phone call from Mr. Ivan Mann, P.Eng., the federal civil servant who had received and read it, and between him and Al, (John's supervisor), it was decided that a major rewrite of the report was necessary – **pronto**. "Jacob, will you please drive to the Airport and find out what is actually wrong with the report, and also learn how we can improve it for a second submission." Wow. That was quite a challenge, but I had a long discussion with the very competent official at the Airport, returned and spoke to Al Swanson about changes that I suggested (and those that had been intimated to me) and he agreed that the report had been "poorly written" and made some more amendments. The revised version of the report was submitted (**with my name, signature and seal**) before John Gill returned from his trip to his country of origin... Although instructed by Al to do that revision, it did not improve relations between the two of us. This must have happened in the mid-summer of 1982....

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<sup>122</sup> A minimum horizontal separation (5,000 ft.?) is required between parallel runways, as had been researched extensively. Any airport access road could not remain between two runways. I had already completed a Graduate Course in "Highway and Airport Engineering" at the U of C (under Dr. M. Sargious) when working on this project.

For reasons that will become clear below, the last UMA project I would like to describe is the **Obed-Marsh Thermal Coal Mine conveyor belt access road**, (together with a **mine access road**) for Union Oil Company of Canada, Coal Division. These projects were also going to use UMA-ACE for calculating earthworks quantities. From a proposed open pit coal mine, (and the coal field supposedly extends far beyond the mined out area on 2019 GoogleMaps), a German designed (= Krupp mechanical and Siemens electrical) 42” wide conveyor system was proposed, straight to the closest point on the Canadian National Railway line between Edmonton and Jasper, that runs south of the Athabasca River.



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We had to design an access road and a river bridge<sup>124</sup> parallel to this conveyor, and the road would also cross the railway line and continue to Obed Summit, the highest point on the Yellowhead Highway (Highway 16) between Edmonton and Jasper. Directly opposite this intersection point was a small Provincial Park (where there was a sign warning for the presence of bears!) Emerson Creek Road, a forestry road, north of the Athabasca River, could only be reached from a low level bridge near the pulp mill about 20 km upstream, at the Town of Hinton, where UMA had a small field office for municipal projects. The actual access road to the mine would start close to Hinton on the north side of the Athabasca River. I later heard that Bechtel was also involved in the project.

We were given a preliminary alignment of the conveyor belt, and topographical mapping of the strips of land for the mine access road and the conveyor access road. (On this excellent forestry mapping, we could see how this forestry road had been “designed”, **from the top of a bulldozer**. It was explained to me that an operator would normally stand on top of the engine, find a very high tree straight ahead, go out and walk to it and “flag it”, climb back

into the cab, go forward and destroy all trees up to it, and then just repeat the process. That whole road looked like a set of short (400 feet?) tangents, patched together, not really straight but still going in the general direction of the road.) Mr. Eric W. Beresford, P.Eng., manager of the client’s Coal Division who had a British Coal mining background, insisted that the new road would not be like that – and that the ease of maintenance of the conveyor belt from this road was of prime importance. His office assistant, Mr. Merv Mulligan, P.Eng., a civil engineer, agreed with this. Union Oil’s office suite was on the third floor of a very new building on the north side of 11 Avenue SW, called Joffre Place. In the summer of 1981 already, I had a chance to visit the mine site with UMA’s local technologist and Merv, see **right** for what a real Alberta “cut line” looks like. I was even given a plastic bag with a sample of the type of coal that would be mined on top of this mountain!



Cut line for conveyor belt.

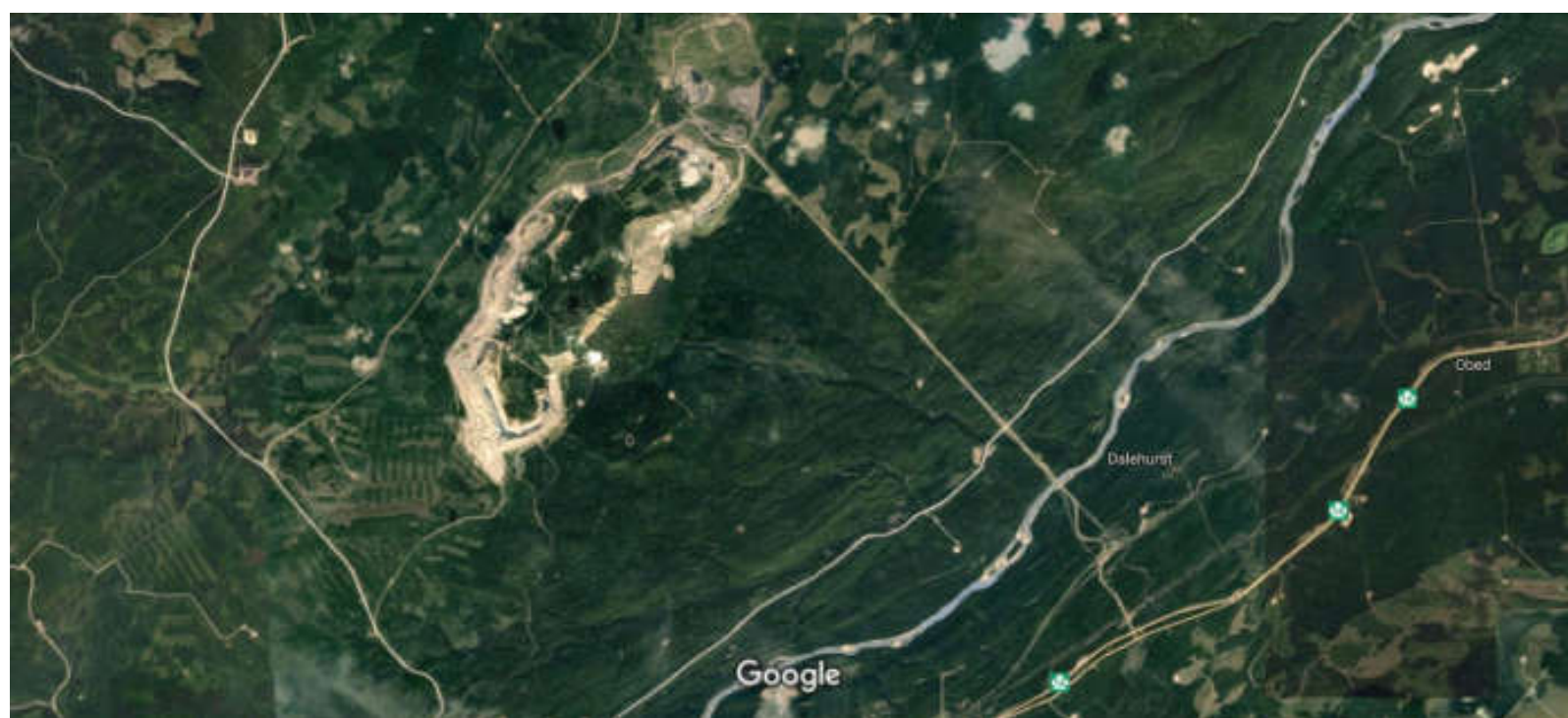
Various studies had already been conducted in this area, one of them to “estimate” the moose population. To establish that, an environmental expert had strung numerous purple strings in the bush, along all the routes where moose would presumably walk as they grazed and roamed all day and night.

<sup>123</sup> This “Report by an Independent Task Force” of the Canada West Foundation (Calgary, November 1980) shaped much of the thinking in those days. That was forty years ago. A report called “South Africa’s Coal Resources” by the Coal Advisory Board (Johannesburg, February 1969) was about a similar situation. Much has happened since...

<sup>124</sup> The bridge design was to be done by UMA in Edmonton.

After a few weeks, the environmentalist had returned to the site and recorded at how many places these purple strings had been broken. Based on that “very scientific study”, he (or she) had determined that there were **0.28 moose per square kilometer**. It boggled Geoff Williams’ mind (and mine) how the likelihood of a single moose wandering to and fro and breaking the same wool thread fifteen times in one day, had escaped the expert’s mind. (See stanza 1 of the Calf Path!) There were several cut lines in the area, (Alberta was full of cut lines for seismic surveying) and this was why the aerial map-ping had been fairly easy to do, and fairly accurate – assuming an average tree height to deduce ground level, based on measuring some average trees. Geoff (a **map geek** who designed maps for ski trails in the Bragg Creek area from his home in Montgomery, which he sold on the trail!) and I got cracking to establish some likely offsets, a typical cross section, and alignments for the conveyor belt access road. It all made perfect sense, and could be done.

We presented the preliminary work in draft form to the client, and were then asked to conduct another site visit to the conveyor belt road, particularly to get a feel for the terrain and to check the proposed bridge location. John Gill, Bob Nowak, P.Eng. (UMA’s geotechnical engineer) and I had to fly to Hinton, in November 1981. We departed from Calgary International Airport with a small plane, and arrived at Hinton Airport, which is quite a distance west of town, around 3 p.m. A pickup truck was there, but seating was inadequate, and I had to sit in the bottom of the box, outside, in the bitter cold! So I was thickly wrapped up and had not yet frozen when we reached the small UMA office. The modus operandi developed was that the three of us were going to be dropped off the next day on Highway 16 (at the Provincial Park) and that we would then head straight into the bush, at a direction almost perpendicular to the highway. We would cross the CN railway and continue downhill to the Athabasca River, crossing it on foot and then find a little gully on the north side, which was close to the already determined route. After crossing Emerson Creek Road, (about a kilometre from the river), we would continue uphill for as much as possible, up to a certain time, and then head back. We would be picked up at Emerson Creek Road (and yes, I would not have to sit in the cold) and return to town for a serious debriefing session. That was our modus operandi for the day, and it all seemed very straightforward and logical. Why not? One guy from Alberta, another one from Australia and a more recent South African greenhorn.



This shows an fairly recent aerial image of Obed-Marsh Mine, with its **access road** (left), **conveyor belt access**

**road** (centre), Athabasca River bridge and **CN railhead**. Highway 16 (at right) is now a divided highway, with a very wide median opposite Obed Summit Park. Emerson Creek Road is now a secondary public highway.

Having discussed this, we went to our motel – in the other (west) part of town.<sup>125</sup> And yes, we had an excellent hike; John, Bob and I found everything that we had expected to see and what we needed to know for a meaningful design for the conveyor belt access road. About fifty metres north of the single Canadian National railway track, we discovered the remnants of a second railway embankment, within a nice straight old clearing, obviously without ballast, ties or rails, but .... a short distance to the east, we also discovered the remnants of a timber trestle over a creek. On the mapping, I had already seen lines showing “a right-of-way of some kind”, (without asking Gordon Schumacher about it) and I was then told (by John or Bob) that this was the abandoned remnant of either the **Canadian Northern Railway** or the **Grand Trunk Pacific Railway**. That day, I learnt some more Canadian railway history. Wikipedia tells me this about these two companies:

**About the GTPR:** Construction began on the Canadian Prairies in 1905, the year that the provinces of Alberta and Saskatchewan were established, proceeding west to Saskatoon, Saskatchewan in 1907, and Edmonton, Alberta in 1909. The GTPR followed the original Sandford Fleming "Canadian Pacific Survey" route from Jasper, Alberta through the Yellowhead Pass, and the track-laying machine crossed the BC/Alberta border in November 1911. The more northerly Pine Pass option, as specified in its charter, may have been a better choice in terms of developing traffic, and in improving the current CNR network (especially if the later Pacific Great Eastern Railway route had opted for the Monkman Pass crossing). ... The CNoR tracklaying through the Canadian Rockies in 1913 roughly paralleled the GTPR line of 1911, creating about 100 miles of duplication. **In 1917, a contingent from the Corps of Canadian Railway Troops added several crossovers to amalgamate the tracks into a single line along the preferred grade as far west as Red Pass Junction.** The surplus rails were lifted and the heavier grade GTPR ones shipped to France for use during World War I.<sup>126</sup> By this time, both railway companies were in dire financial straits. In March 1919, after the GTPR defaulted on construction loans to the federal government, the federal Department of Railways and Canals took over all GTPR operations until July 1920, when the CNR assumed control.

**About the CNoR:** In western Canada, in 1910 construction was started on the line west of Edmonton through Yellowhead Pass to Vancouver, thanks to subsidies provided by the government of British Columbia. ... In addition to difficult construction between Jasper, Alberta, and Vancouver, CNoR started construction west of Edmonton in 1910, fully two years later than GTPR, which had started construction east from Prince Rupert in the Skeena River, leading to Yellowhead Pass. ... The last spike of the CNoR transcontinental railway was driven January 23, 1915, at Basque, British Columbia. Freight and passenger service north of Lake Superior also started in 1915, resulting in a system between Montreal and Vancouver, with lines in Nova Scotia, Southern Ontario, Minnesota, and on Vancouver Island. Between 1915 and 1918, CNoR tried desperately to increase profits during the height of conflict in the First World War when the majority of wartime traffic was moving on CPR. The company was also saddled with ongoing construction costs associated with the Mount Royal Tunnel project. ... CNoR was heavily indebted to banks and governments, and its profitable branchlines in the prairie provinces - "Canada's breadbasket" - would not generate enough revenue to cover construction costs in other areas. Unable to repay construction costs, the company requested financial aid. In exchange for funds, the federal government gained majority control of shares and CNoR was nationalized on September 6,

<sup>125</sup> The Town of Hinton consists of two entirely separate areas – as if it had grown out from the two original railway stations, as explained on the next page! There had also been a coal mine in the downtown itself, probably loading coal at the station. Much is available on the historic website of Hinton. When Highway 16 came, it snaked nicely between the two pre-existing hamlets. Something snaking happened in the Crowsnest Pass, with one railway.

<sup>126</sup> I need to presume from this that the original GTPR was abandoned so that the original CNoR remained. Or not?



1918, when the directors of CNoR, including Mackenzie and Mann, resigned. The replacement board of directors appointed by the federal government forced CNoR to assume the management of federally owned Canadian Government Railways (CGR). On December 20, 1918, a Privy Council order directed CNoR and CGR to be managed under the moniker Canadian National Railway (CNR) as a means to simplify funding and operations, although CNoR and CGR would not be formally merged and cease corporate existence until January 20, 1923, the date that CNR was formally consolidated.

On our way back to Hinton, we crossed the Athabasca River by way of the low level bridge near the pulp mill. There was open water, and on my astonished question, our driver casually replied: **“O yes, this pulp mill often dumps a lot of hot water into the river; one can never know when there will be ice downstream.”** Quite unaware of this fact, we had already crossed the river on ice that Bob Novak, (a native Albertan), had considered “thick enough to walk on”. I have often had nightmares about “what could have happened” on that day,

but ... this is also how the Lord protects us when we do not even know that He does. He protected me and my colleagues, and has also done so on many other occasions, (some of which I cannot even recall), because I thought them to be a bit inconsequential, or because I thought I had been smart enough not to get into trouble that day.

This **Obed Mountain Road** was built a few years later with its conveyor and bridge across the Athabasca River. The coal mine was in operation for many years, (until 2003, and then again after 2009) but not by the Coal Division of Union Oil Company of Canada. After we had prepared a report with our preliminary design, the project stalled at the office on 11 Avenue, like so many others. It was the beginning of “the worst of times” indeed.

In early 1982 already, I was asked to assist with UMA’s **“marketing efforts”**. I was asked to read some out-of-town newspapers like the Red Deer Advocate and the Drumheller News during office hours, on a regular basis, and if I found something that might become a “project”, I was allowed to make telephonic enquiries with the appropriate person mentioned in the article. I had to alert “Management” on a specially prepared “Business Development Contact Report”, that was to be digitized for the possible use by others. I took this privilege seriously, and took pains writing some of these memos (see the one **shown at left, next page,** on 1982-07-07).



From Emerson Creek Road, looking southeast, toward the Athabasca River, CN railhead and Highway 16.



From Emerson Creek Road, looking northwest, toward the Obed-Marsh coal mine. (both September 1999 photos.)

**BUSINESS DEVELOPMENT CONTACT REPORT**

Date: 1982-07-07

Client: CALVIN SNYDER ESTATE By: J.A. DE RAADT

Division: TRANSPORTATION Client Base No. Copy to: K. Buchner

Complete Address: J.W. Gill G.W. Horn

Postal Code: B.L. Bieske

F. Young

Project: POSSIBLE INDUSTRIAL SUBDIVISION

First Client Contact  Follow up Contact T

Persons Contacted: Mr. RM (Bob) Sinclair, Executor Phone 266-204

Mrs. Joan Snyder, Executor Phone 243-309

Doug Richardson, Senior VP, Newco Phone 261-29

Decision Makers: Same as above

Project Description: Land East of Balon Trail, north and south of the Knight Boulevard Recently Agricultural, future Industrial

Client Requirements: Recent information on expressway standards in the area lead us to believe this site might have access problems if no planning is done now. We can help this client and also Richardson who owns land north of 48 Ave (see job no 2109-8121-049) owned by Ethmo Investments Ltd.

Action to be Taken: Meeting with Bob Sinclair at his request, as soon as he returns from holidays. Afterwards perhaps a meeting with Richardson or with two clients so that comprehensive planning can take place.

Person Responsible for Follow-up Action: J.A. de Raadt/Fred Young Date of Follow-up Action: July 1982

COMPUTER INPUT (YES/NO) Yes NEW  R=CLIENT REQUEST DATE FORMAT = YYMMDD

1	2	CLIENT NAME	18	17	DIVISION	26	27	BASE	30	31	PHONE NO.	40			
1	2	SNYDER ESTATE	18	17	TRANSPORTATION	26	27	30	31	32	266	2047			
41	42	CLIENT CONTACT	55	56	TITLE	65	66	UMA CONTACT	75	76		80			
1	2	SNYDER	55	56	EXECUTOR	65	66	DE RAADT	75	76		80			
1	2	CONTACT DATE	7	8	FOLLOW UP BY	22	23	FOLLOW DATE	28	29	METHOD	36	37	BRDP	40
1	2	820629	7	8	DE RAADT	22	23	820731	28	29	MEETING	36	37	2109	40
41	42	SUBJECT OR REMARKS													
41	42	POSSIBLE INDUSTRIAL SUBDIVISION EAST OF BALON TRAIL													
1	2	CLIENT NAME	18	17	DIVISION	26	27	BASE	30	31	PHONE NO.	40			
1	2	EMMIS INVESTMENT	18	17	TRANSPORTATION	26	27	30	31	32	261	2990			
41	42	CLIENT CONTACT	55	56	TITLE	65	66	UMA CONTACT	75	76		80			
1	2	CHARLTON	55	56	DOUG RICHARDSON	65	66	DE RAADT	75	76		80			
1	2	CONTACT DATE	7	8	FOLLOW UP BY	22	23	FOLLOW DATE	28	29	METHOD	36	37	BRDP	40
1	2	820629	7	8	DE RAADT	22	23	820731	28	29	MEETING	36	37	2109	40
41	42	SUBJECT OR REMARKS													
41	42	MEETING DEPENDS ON SINCLAIR MEETING													

EDITED: M.S. BATCH NO. KEY PUNCHED INPUTS ON BACK OF SHEET

I have no idea if any of these reports lead to some “new work”, except one that definitely did not – the proposal for a railway museum and tourist train from Drumheller to Grand Coulee (see above). I also read the stories of various crashes of vehicles and trains, and how the CTC (out of Hull, P.Q.) was trying to determine who actually had been at fault for a crash (see below). It was clear to me that Alberta’s **track record** (pun intended) was not good. Why, o why? Was it perhaps that Canada was in some strange way more primitive than I had ever thought it could be, in comparison with Europe and (perish the thought) even with South Africa (see Part 1 and Part 2) about the issue of **abandonment** of these many seemingly unnecessary level crossings? Was the Canadian reality perhaps “symptomatic” of a larger capitalistic way of operating railways, just to make money for its shareholders (CPR) or the Federal Government (CN), without considering its customers, as a “public service”?

It was not totally unexpected when I was given a “one month notice” letter on 29 September 1982, and also received my second “Record of Employment” toward the end of October 1982. My annual salary at that time was \$ 39 000 p.a., (thanks to Al

Swanson). But I had a little reprieve from sitting “at home” and applying my skills in résumé writing for the non-existing jobs in Calgary. I applied for E.I. benefits on 18 October 1982, and was told that one firm in town was looking for a “Senior Highway Design Engineer”, namely RCPL, and the contact person was a certain Mr. Ed Tahmazian! I obviously did not comment nor phone him.

But something happened with the **Obed-Marsh project**. Union Oil’s prospects of selling or operating the project were getting some attention. More work was needed **without** (high) UMA’s “charge-out rates”. Mr. Beresford hired me to work in the office on 11 Avenue SW and “manually” prepare the actual quantities and a “better” cost estimate for Obed Mountain Road. I was glad that I had not lost my skills in doing manual work. I worked there by myself for about three weeks, documenting everything on papers with a letterhead “**Sentinel Management Corporation - Engineers & Project Managers**” – a Vancouver B.C. firm, with whose Mr. Paul Preminger I liaised quite well. Mr. Beresford was anxious to have the design completed and show it to any firm

*Red Box* THE ADVOCATE, Tuesday, August 17, 1982 **11B**

### Blackfalds, Stettler mishaps studied

# Railways, drivers blamed in crashes

OTTAWA (CP) — There was nothing mysterious about the tragic rash of 10 train-vehicle accidents that killed nine and injured 30 in Alberta in 27 days last year, a federal investigation has found.

Drivers don’t pay enough attention at rail crossings, and they pay for their complacency with their lives and those of others, said a report released Monday by the Canadian Transport Commission.

However, railways are far from blameless.

The 100-page report found railways aren’t adequately maintaining crossing signs or following proper procedure at some crossings.

The investigation was ordered because of the disturbing frequency of the crashes, which occurred between July 24 and August 19, 1981.

Five occurred at Canadian National Railway crossings near Lavoy, Bonnyville, Camrose, Calgary and Edmonton. The others were at CP Rail crossings near Blackfalds, Balzac, Stettler, Calgary and Cowley.

“We wanted to find out what the heck was going on,” a spokesman for the Canadian Transport Commission said Monday.

Drivers get most of the blame for their cavalier attitude toward rail crossings, but the two rail companies were negligent in a number of areas, the report said.

Reflective material on rail crossing signs was in poor condition at five of the 10 accident scenes.

Train crews are frequently unaware of the procedure for protecting train movements across some roadways, it said.

Trains should be made more visible, either with lights or reflective material, the report recommended.

And both rail companies should modify all train engines to improve the engineers’ view of the track and road crossings, said the report, written by rail transport committee members J. L. Gehring, chief of safety and services for Alberta, and T. M. Coghlan, crossing safety engineer for the national office in Hull, Que.

The 10 accidents were symptomatic of a greater problem, they said,

that would buy the coal mine; he was not an “oil man”. In 1982 already, he had made a presentation about this mine at the 6<sup>th</sup> Annual British Columbia Mine Reclamation Symposium, in Vernon, B.C. His paper was titled **“Planning for post-mining reclamation within a forest management area, Obed-Marsh Project, Hinton, Alberta”**, as mentioned in the Proceedings of the Technical and Research Committee on Reclamation. He moved to Hinton in early 1983, shortly after I had completed my work at Joffre Place.

Speaking to the 84-year old Eric Beresford earlier last year, (2019-03-26) brings back good memories about a short bright period at the beginning of a year of uncertainty. The Obed-March project was built by Union Oil, then sold to Luscar Ltd., who operated it and then sold it to Westmoreland, who operated it (again) and had just sold it to Sherritt when disaster struck on **31 October 2009** with the major failure of a tailings pond dam. For many years, I did not give this project any thought, but the day after Princess Diana died, Lydia and I travelled by Hinton with our Ford Ranger longbox pick-up truck and a camper. We were on our way from Langley to my aunt in Edmonton and from there to friends in Paradise Hill, Saskatchewan, (and we had heard nothing else the previous day on CBC, except what had occurred in Paris in France). Travelling from Valemount on **2 September 1997**, we decided to cross the low level bridge at Hinton and go east along Emerson Creek Road. At the conveyor belt underpass, we stopped and I took two photos (**previous page**). Returning to Hinton, we also stopped at the small Obed Provincial Park, and made it to where the road became “private”, with a barrier. From that point, we could see coal being loaded into a unit train, and knew that this coal would go through Langley on its way to the Roberts Port Coal Terminal. The internet advised me in 2019 that in December 2007, Eric Beresford still worked from Carstairs, Alberta, and I found a .pdf file as an Addendum to an Assessment Report by him, for a proposed coal mine project near Tula-meen, B.C. **So I dialed his phone number**, and when he called back, I had a wonderful discussion with a still active 84-year old mining engineer, who certainly has had a more interesting and stable international career (it appears, even in New Zealand), and had not yet found time to start writing his memoirs.

**I would like to close this chapter** by quoting a “quotation of a statement” that was made sixteen years before I was abruptly laid off by UMA. In **1966**, Mr. A. M. Steel, O.B.E., B.Sc. (Eng.), M.I.C.E, the Civil Chief Engineer, South African Railways, Johannesburg, was President of the **South African Institution of Civil Engineers**. (This was the first year of my professional career, as reported above as well as in Part 1 and Part 2.) Page 305 of the official Proceedings of the SAICE, printed in the September 1966 issue of “The Civil Engineer in South Africa” contain the following gem **quotation**, uttered as a portion of the President’s response to the toast of the speaker (which had been proposed by Mr. B.A. Kantey, Vice-President) at the Annual Banquet of 24 August 1966. This speaker had been the Hon. Mr. Jan Haak, the Government’s Minister of Mining and Planning, with 339 persons attending. Mr. Steel said the following under a heading “Brink of real expansion”:

“A Principal of London University – himself a devotee of the humanities, not any of the sciences – has asserted that we must improve our technology or learn Russian, and I would say that not only is the first choice preferable but a good deal easier. **There is another advantage pointed out by the father when asked by his son what he should take up in life. He replied that there were two groups of people in this world, those who got things done and those who tried to get the credits. And he was sure his son would encounter less competition if he joined the first group.**”

I have always believed that (by the grace of God) I was (and still am) **someone within the first group of people**. “Getting things done” has mostly been my stated purpose. **“The road less taken”** is mostly (and for that very reason) also **“the more difficult”**, but not if one is not alone. Keeping this in mind avoids pride, and leads to humility instead. It has not always been easy to keep on believing this, as evidenced by the sixteen and a half years before my lay-off, and of the many years since that time. “But I know Whom I have believed, and am persuaded, that He is able, to keep that which I’ve committed unto Him against that day.”

### **Chapter 3 – A lean year in Calgary, before going to Whitehorse Yukon (1982-1983).**

So I joined the throng of people (both professional and non-professional) who were laid off in Calgary and the rest of Alberta that fall of 1982, **after working 3 years and 1 week at UMA**. I had already applied for various “public service sector” positions since the summer of 1981. (Not because I was unhappy at UMA, but because of a lack of remuneration, as well as a concern about the future.) I had started at UMA with a salary \$ 25 440 p.a., which was raised to \$ 32 400 a year later. I believe that I was still taken advantage of, particularly because I had successfully completed two graduate courses at the U of C and had more and more Canadian experience. Toward the end of 1981, Al Swanson granted me a hefty pay raise to \$ 39 000 p.a., making clear to me that the firm could not pay me more, because things were already getting strangely dim. I had seen Alberta Transportation’s career and promotional opportunities in the Calgary Herald, and in 1981, had already applied for three public service positions: **District Operations Engineer - Senior Officer I, High Level, Project Engineer, Operational Design, Edmonton** and **District Transportation Engineer - Senior Officer IIB, High Level**. I was granted interviews for the second and third of these, in Edmonton on 16 June 1981. I drove up to the Provincial Capital, and on rejection of my applications, claimed and was awarded “the least of (a) Single PWA airfare return ticket, as it was two months ago, and (b) 400 miles per car, as per the going rate of your department.” I also wrote to “Bryce, Haultain, Personnel Consultants” and the well-known “Technical Service Council”, but I did not contact Mr. Copeman again. In the summer of 1982, an agency called Eagle and Associates approached me about a position with a firm that appeared to be RCPL. I expressed my willingness to Mr. Hugh Hauge to return to them. No results.

In June 1982, I had continued my efforts to get out of the private sector maelstrom in Calgary. I applied for positions of **Resident Transportation Engineer, Medicine Hat, Resident Transportation Engineer, Vermilion** and **Resident Transportation Engineer, Athabasca**, all without success. I had three interviews, and had to apply for leave to go to Medicine Hat on 25 June 1982. I also applied again for a position of **Project Engineer, Operational Design, Edmonton** and had another interview in Edmonton. I applied for a position of **Resident Transportation Engineer, High Level**, but had the flu and could not attend that interview in Edmonton. After my dismissal, I applied for positions of **District Operations Engineer, Athabasca** and **District Operations Engineer, Grande Prairie** and did not get interviews. I applied for the position of **Resident Transportation Engineer, Sundre**, and had an interview in Calgary on 14 October 1982. I also applied for the positions of **District Construction Engineer, Red Deer** and **District Construction Engineer, Grande Prairie**,<sup>127</sup> without a positive result. I wondered if my South African background caused all this, or even some “overqualification”. All these rejection letters, a.k.a. “Dear John letters”, (except the footnoted one), from different “personnel administrators”, had an identical text:

Thank you for submitting an application for the above noted competition.

This will advise that the final selection will be made from a limited number of applicants whose qualifications and experience more closely match our requirements. Please be assured that your application was afforded careful consideration.

Your interest in this position with Alberta Transportation is appreciated, and you are invited to apply for any future positions for which you feel qualified.

Yours truly,

At the back of UMA’s envelope containing my “Letter of Dismissal”, I jotted down the list of **investments** that Lydia and I had on 29 September 1982, as well as their respective interest rates, as follows:

CIBC - **16½%**: \$ 624.74; CIBC - **9¾%**: \$ 4,363.57; Co-op Credit Union - **12%**: \$ 10,000.00; Co-op Credit

<sup>127</sup> This competition was cancelled “due to unforeseen circumstances”, so that I received a differently worded letter.

Union - **15%**: \$ 2,500.00; Co-op Credit Union - **14¼%**: \$ 5,000.00; Co-op Credit Union - **12½%**: \$ 5,000.00; Bank of Mont-real (cheq): \$ 1,556.64; Principal Group: \$ 4.68; UMA Pens.: ± \$1,000.00; Co-Op Credit Union (sav): \$ 397.67. We owned three vehicles: a 1974 Hornet Station wagon, a 1976 Gremlin and a 1973 Matador Station wagon, **and a mortgage**. We wondered how long we might need to tighten our collective belts, and to which extent, with four growing children. But – we trusted that the Lord God would guide us in our decisions.

Dear Sir:

Re: de Raadt, Jacob A., P. Eng.

We act as solicitors for Jacob A. de Raadt, whose employment with your firm was recently terminated pursuant to your Notice of Termination dated October 1, 1982.

Mr. de Raadt has consulted the writer with respect to these matters and has indicated that he is experiencing considerable difficulty securing alternative employment. Further, Mr. de Raadt advises that during his term of employment with yourselves, he had been a diligent, reliable, competent and conscientious member of your firm. Mr. de Raadt has indicated that he would be pleased to consider an offer of reinstatement with Underwood McLellan Ltd. In view of these considerations, we would request that you re-consider his position. As you are aware, Mr. de Raadt has a substantial amount of engineering experience and possesses a variety of skills. Further, he has indicated that he is willing to take a position of lesser status than his former position as senior transportation engineer. Additionally, he is willing to relocate if necessary. In fairness to Mr. de Raadt, kindly review the requirements of Underwood McLellan Ltd. in Calgary and elsewhere at your earliest convenience.

In the meanwhile, we would request that you forward to Mr. de Raadt a comprehensive letter of recommendation to assist him in his present job search.

Thank you very much for your anticipated co-operation.

I did not leave UMA without lodging a serious claim for “**improper dismissal**”. At left is the body of the letter that Mr. John Knibbe LL.B. of the law firm Vickers, Gilles, Pomerance, Dartnell and Knibbe wrote to UMA on 9 November 1982. This was during the second week after I had left the office at Kensington Road NW; the law office was in the South-centre Executive Tower; John Knibbe had been recommended to us by friends in the Christian Reformed church. As can be seen **on the next page**, John Knibbe did his job well with the Statement of Claim that he submitted in February 1983. The total claim of

\$ 10,000.00 (general damages) plus \$ 53,456.00<sup>128</sup> (special damages) went straight to the Court of Queen’s Bench in Calgary, where John Gill, P.Eng. testified on behalf of UMA’s decision. While being questioned by the honourable judge, his tongue slipped somewhat, by stating that I was “**only an immigrant**”.<sup>129</sup> The judge did not like that at all, and then ruled that I should receive “relief”, but how much it was, Lydia and I regretably do not remember.<sup>130</sup>

When we received the money from the settlement with UMA, we could miraculously deposit moneys at ever increasing rates into term depositions for three months periods. So during the time we received E.I. benefits, we would theoretically have enough to live on – see below. While the really high interest rates were over by mid-1983, our house’s mortgage rate was still relatively low. That later allowed us to pay a down payment on a residence in Whitehorse, Yukon, **without** having to sell our house in Calgary. How? Keep on reading!

We knew of people who were much worse off than us. One head of a family with four children was an electrical technologist, specializing in coal fired power stations. He had been hired out of the Netherlands by Monenco in Calgary, and had bought a house close to Calgary Christian School. He lost his job, had a high interest rate mortgage, and could at long last only get another job with Canadian Western Natural Gas in Calgary, which he did not like at all. Eventually, (in the early 90’s?) the family returned to the Netherlands. It was also quite obvious that new immigrants could not be attracted to Alberta at this time.

<sup>128</sup> This amount was somehow based on “fifteen months of salary” – for which there was some “case law” already.

<sup>129</sup> Many years later, I heard about the Court Case against CN about a major train crash near Jasper, Alberta, in which a young lawyer named **John Diefenbaker** made his mark when he got CN’s lawyer to state that old wooden box cars had been used for military personnel ... because they were “**only soldiers**”.

<sup>130</sup> As an **Australian immigrant** (who later returned and work in Canberra). Was he a Canadian citizen in 1983?

WHEREFORE THE PLAINTIFF CLAIMS:

- (a) the sum of \$10,000.00 general damages;
- (b) the sum of \$53,456.00 special damages with respect to loss of income;
- (c) an accounting of the value of all fringe benefits to which the Plaintiff was entitled during the course of his employment with the Defendant, to which the Plaintiff was entitled during the course of his employment with the Defendant, to which the Plaintiff is entitled for the 15 months period of notice that would have been reasonable under the circumstances, minus the value of any such benefits received during the months of October, 1982, if any;
- (d) Costs of this action;
- (e) Such further and other relief as this Honourable Court may deem meet.

DATED at the city of Calgary, in the Province of Alberta, this      day of February, A.D. 1983, AND DELIVERED by VICKERS, GILLIS, POMERANCE, DARTNESS & KNIBBE, Solicitors for the Plaintiff, whose address for service is in care of the said Solicitors, at 520, 11012 MacLeod Trail S. Calgary, Alberta.

ISSUED out of the office of the Clerk of the Court of Queen's Bench of Alberta, Judicial District of Calgary, this      day of February, A.D. 1983.

(Part of Statement of Claim against Underwood McLellan Ltd., February 1983.)

(In my files is a page from an issue of Chatelaine Magazine of those days, written by a female lawyer, about the topic of wrongful dismissal. This issue was not new at the time, and there was already quite a body of legal precedent in Canada.)

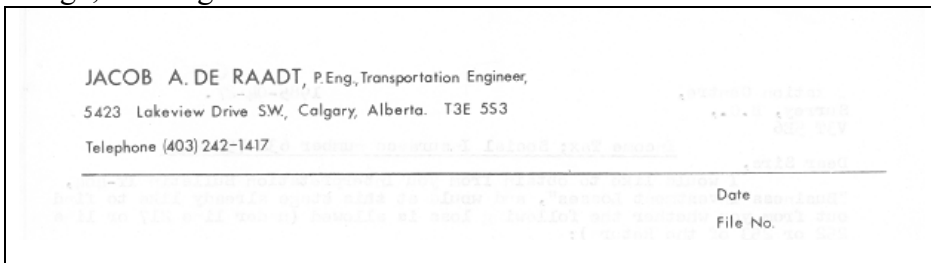
In early 1983, we applied for Canadian citizenship. We could have done this earlier, after living 3 years in Canada as "landed immigrants", but I had found that in my job interviews for public service positions, this type of "deficiency" had come up a few times. Our applications were approved, and we swore allegiance to Her Majesty Queen Elizabeth II as Queen of Canada, in June 1983, at the Federal Building on 4<sup>th</sup> Avenue SW in downtown Calgary, without much ado. (It was the second time that I swore allegiance to the same Lady!)

Among my papers of that year, I inserted a newspaper clipping "**Quote of the day**" with the following: "**When a person undertakes employment he necessarily foregoes, to the extent required by the employment, rights or freedoms which he might otherwise exercise and enjoy.**" Chief Justice A.L. Thurlow on a civil servant for criticizing Government policies." Food for thought, surely, for me as a new Canadian, because I even re-applied for civil service positions all over rural Alberta, even like **District Construction Engineer, Vermillion**, for which I was granted an interview in Grand Prairie, in January 1983, receiving \$ 103.65, travel costs, broken up as follows: 2 x 461 = 922km @ 7.5 c/km = \$ 69.15; motel = \$ 24,00; lunch = \$ 6.00 and breakfast = \$ 4.50, plus a rejection letter with the words: "It was a pleasure to meet with you and to discuss your qualifications for the above noted position at your recent interview. Although you were given every consideration, we regret to advise that you were not successful in this competition." In April 1983, I applied for **Senior Resident Engineer, Rocky Mountain House**, and in May 1983 for **District Construction Engineer, Grande Prairie** and **once again for District Construction Engineer, Vermillion**. But "No". I applied for a position with Sentinel Management Corporation and for one as City Engineer of Fernie, B.C., (through a Vancouver agent called G.H. Newhouse & Associates), and I later discovered that a former colleague at RCPL - named Jim Miller - got that job. I applied for a position with the City of Regina, Saskatchewan, (which was cancelled) and for one at the City of Penticton, B.C. I applied for a position with the Calgary Safety Council, for a job through the Murco Group (never heard a word), and even for a position with the City of Burlington, Ontario (because it seemed that Ontarians were returning there in droves, even people from our church who had been in Calgary for shorter periods than us). I even responded to an advertisement regarding Civil Engineers for Saudi Arabia. And I applied for teaching positions at colleges at Lethbridge and Medicine Hat, and for a research position at

the Canada West Foundation. Lydia and I even thought of emigrating to Bolivia as a civil engineer, or to enquire from my brother Arie in California if emigrating to the United States would be possible.

To keep my professional sanity, I continued to attend the Southern Alberta Section meetings of ITE. After March 1983, I even prepared an informal “**Attendance List**” from the Minutes of 13 meetings held between 05/79 and 03/83. The Calgary group had always been small; Geza Solty had attended (all) **13** meetings, Nick Finn **12** of them, Gerry Generoux and Doug Morrison **11** of them, Al Swanson and me **10** of them, Dan Bolger and Dave Durant **9** of them, John Morrall **8** of them (and so on down the list).<sup>131</sup> Perhaps my analysis was not fair, because the list also included one-time “visitors”. The highest attendance numbers were **24** people in 11/82, **22** people in 10/81 and **21** people in 11/81, and by 03/83, some of the older members were on the point of retiring, like Ernie Orford of Calgary Transit, who had been (I was told) one of the founding members of the Section, and had seen the C-Train completed under his direction as the culmination of his career.<sup>132</sup> And there had obviously been new blood in those years, like Ms. Alison Wong, P.Eng., who later worked for the City of Vancouver, BC, and was very active with the Vancouver Section and the Organizing Committee for the 1997 Quad Convention. (I picked up my hardcopy of the Proceedings of that wonderful Convention in her office at Vancouver City Hall, because I had told her by phone that I did not have a computer that could read these Proceedings on a CD! How has technology changed since!

Now followed some difficult times. I was able to have a nice letterhead (**at left**) produced by Mrs. Ula McCullough, our neighbour’s wife who worked at an office somewhere with a nice word processor. That enabled me



to solicit my services **left, right and centre** by writing about 70 good letters, (according to my typed note of 28 June 1982), and was able to obtain a few very minor (paying) consulting projects, which I only list below, without giving specific details:

- A re-layout of the parking lot of the Calgary Co-Op on Richmond Road, near Sarcee Trail<sup>133</sup>;
- A re-layout of the parking lot of the Red Deer Credit Union, on a small site east of the downtown;
- Some additional advice to Marathon Realty about Northlands Shopping Centre’s parking layout;
- Assisting a Mount Royal resident in opposing a rezoning application with off-site parking problems.

But I realized soon (although knowing it beforehand already) that without proper drafting staff and back-up capabilities, working from the basement of our Lakeview home would be virtually impossible in the long run. Then, out of the blue, someone in our neighbourhood suggested that we join them and go to a meeting in Huntingdon Hills, on the other side of the City, where a presentation was made about “having your own business”. It turned out to be the preamble to an involvement in Amway. (In retrospect, Lydia and I are very glad that we did not get trapped into “**multi-level marketing**” at that time, or at any other time later.) It is regrettable that the Amway empire was started by a Christian of Netherlandish descent.<sup>134</sup>

<sup>131</sup> Ed Tahmazian twice, Harvey Olsen twice, Bernie Smira 6 times, John Hall twice and John Gill once (in 11/81)!

<sup>132</sup> During the recession, people called it **Little Ralphie’s Train**, after Ralph Klein, the not-so-little Mayor of Calgary.

<sup>133</sup> We were long time Calgary Co-Op members, and I also sat on an advisory committee that represented the members.

<sup>134</sup> In Whitehorse, someone else tried to do this to us in early 1989, and in Langley, someone else approached us in the period (early 1993) after I had started Grassroots Consulting Services and was once again trying to find a niche in the market for things like **individual-initiated** (opposed to **corporate-initiated**) rezoning and subdivision applications, and even mundane things like small road closure / exchange applications and repairs to sewage force main installations for a small mobile home park. It appears that existing MLM suckers (Amway, Avon) are lured to try to approach economically

From that evening's pleasant (?) wine and dine meeting, we came into contact with two people that shaped the next few months of my "first period of unemployment" (discounting 1979). **Mr. Jack N. McNeil** had a business called **Bartex Barter Systems Ltd.**, operating out of an office in Calgary's northeast. He advertised in the Calgary Herald, and on my response, proposed that I do my minor engineering consulting out of his office, and pay him an initial thousand dollars (as a one-year loan @ 20% interest p.a.), with a further promise of four thousand dollars as "Work Equity" into the firm. There was nice documentation, and it soon seemed that over and above promoting the age old system of bartering, the sharing of computer software, or even franchising it, would also be involved under another company called Bartex Software Store Ltd. When I started to "work" at 221 – 39<sup>th</sup> Avenue NE in late March 1983, I met **Mr. Bill Chennells, P.Eng.** there.

## Six no longer toying at work

**By David Rooney**  
(erald staff writer)

The half-dozen unemployed engineers and geologists who make up Cottage Industries are convinced you can pull yourself up by your bootstraps.

Six months ago they were winging away their time, hoping for work and attending a Wednesday morning discussion group at St. David's United Church.

Today, they have 1,432 square metres of work space in northeast Calgary and are planning to hire 16 people to help them produce affordable plywood hobby horses, castles and slides, as well as dollhouses and furniture fit for a Barbie doll.

Sure, says spokesman Ron Kaake, they've had a lot of financial help from two local businesses and the federal and provincial governments. "But we're doing something really positive and we're doing it ourselves."

"What's happened here is like a small ray of sunshine amidst all the economic doom and gloom we read about every day," the laid-off purchasing manager said.

"We really wanted to work and now we're proving that if you work together you can overcome things like being unemployed. It's like that old adage says, 'You just don't know what you can do until you do it.'"

Kaake said Monday he and his co-workers discovered the joy of toy-making four months ago when he began building a dollhouse for his daughter.

"Then, during one of our talk sessions at St. David's we tried

See **JOBLESS**, Page A2



Paul Gann and Stan Fona apply varnish

## Jobless professionals making toys

**(Continued)**

to think of things we could do with our time and we hit on building dollhouses," he said, adding that at the time the project just seemed like something to do.

"I was amazed at the response," he said. "It reached the point where we had to turn down orders. As it was we ended up working right through until 10:30 on Christmas Eve."

When the men realized they had built 33 doll houses and a large number of hobby horses for their customers, they decided to go into business.

That's when the two governments and two sympathetic businesses, Acme Commercial Painting Ltd. and Benwood Cabinets Ltd., gave them "some big breaks," Kaake said.

Acme agreed to pay \$1,000 of their \$1,500-a-month rent when they moved into its old offices and loading bay at 1530 27th Ave. N.E., while Benwood offered wood and other materials at cost.

The federal government lent the co-op a hand by promising — under its New Employment, Expansion and Development program — to pay each qualified person it hires an \$800-a-month salary until the end of the year.

In addition, the province's Tourism and Small Business Department has offered to help market the co-op's products by sending its representatives to trade fairs in Eastern Canada and the United States.

The aroma of sawdust, lacquer and sweat that wafts through the cinder-block production area seems, for now, to be reward enough for them.

"Man, I wanted to work so badly I'd have dug ditches," said geologist Paul Gann when he took a lunch break.

Having been laid off by an oil company, Bill was one of six professionals (meaning engineers and geologists) who had built 33 dollhouses and lots of hobby horses in the basement of St. David's United Church in the fall of 1982, and there was (political) talk of support to keep this group going. See **below**. But that support obviously did not happen, and Bill had also signed papers for a thousand dollar loan to Jack McNeil, due in 12 months' time, and note that 20% was not extravagant at all, but was about the rate that one would get on a fairly new thing in Canada, a "Daily Interest Savings Account" at any bank or Credit Union in Calgary. In South Africa we had known about this type of savings account, where Trust Bank had started it in the early sixties. But the "**Bartex business**", however, very soon morphed into the software franchising business mode and nothing else. And ... how could I barter my engineering services if there were no actual demand for it, all over Alberta?

Calgary Herald article about the group of Bill Chennells.

Bill and I were able to see that it had only been a **scam**. (Bill could not even type, he later wrote me, let alone use a computer, and I only knew some things **about** a UMA-ACE program, though we had already bought a Commodore VIC-20 computer for our son Theo as birthday present at the Computer Store on 17 Avenue SW.)

Both of us decided to stop driving to the NE of the City (Bill lived on Dalcastle Hill NW and I on Lakeview Drive SW), but we kept in touch about the future repayment of our loans of \$ 1,200.00 in April 1984. By letter, I advised Jack Mc-Neil of our change of address after we had moved to 5 Bamboo Crescent, Whitehorse, Yukon. Only after that, I wrote Bill: "**What now about our money?**" Well, Bill had already thought about it and had started the claim process, and he lead me through it from a distance. I first thought to tell the following story in my Part 4 and to keep you in suspense for some time, (though you might already have guessed the

vulnerable people, just to enhance "their own little empire". The theological basis of MLM has been severely questioned and attacked by people like Rev. Steve Schlissel of New York (as the direct result of my letter to him that questioned the ethical validity of this type of "business").



outcome), but Bill and I had some correspondence, and both of us got a judgment, but could not collect. In short, on 15 October 1984, I asked a good friend in Calgary named Eric Schaap, to go to Court on my behalf, and the

text of that letter **at left** summarizes the situation better than I could do it now.

J.A. de Raadt,  
5 Bamboo Crescent,  
Whitehorse, Yukon.  
Y1A 4V4.

1984-10-15.

Dear Eric, *Schaap*

I would appreciate it tremendously if you could be in court on my behalf on the date and time stipulated in the accompanying document, namely 1.30 pm on 24th October, 1984. I have enclosed the following for your study and presentation:

- a) Original "Plaintiff" copy of summons (yellow) with stub of \$ 4.00 paid.
- b) Affidavit of service of summons - this was the back of a similar form of summons, which I sent back to the court - I think it was also yellow.
- c) Copy of order allowing me to serve by normal mail - my first attempt to serve a summons was unsuccessful, because Jack McNeil failed to pick up a registered letter at the post office. This Ex parte application was then made to allow a service by a normal drop in the mailbox. As you can see, this Order is the Exhibit "A" referred to in the affidavit of service.
- d) Change of address form and Alberta Notice to plaintiff, as I received it.
- e) a whole parcel of the previous summons, with unopened letter to McNeil, and Notice of withdrawal, because I could not prove service at that time. (in case you need all of it, but I doubt it).
- f) Pamphlet "Small claims in Provincial Court). I have one here too.
- g) Article "You and the law".

You may be aware of what happened during the time that I was unemployed in Calgary. I became interested in a "business venture" which was advertised in the Calgary Herald, whereby people were requested to call for investment in company that would set up franchised software stores. The idea was that every investor would be an advisor and would develop software at home (a kind of home industry) and this would be part of "Bartex Software Store Ltd.". I, as well as a few others, invested \$ 1000.00 in this venture, by cheques to Bart Barter Systems Ltd. (copies of the cheques are also enclosed, as (h), as well as the original cheque 119 and bank advice of cheque 120.) I soon became aware that the matter was a sham, that there was hardly anything done and that there was just no market for such a venture. Nevertheless, I stayed there for a few weeks, to do things that I thought had to be done for the set up of such an organization. With me was Bill Chennels, an engineer who was in the same boat as I. He has up to now done the work at the courthouse, but cannot anymore because he is employed and is very busy.

It would be worthwhile, Eric, if you could just have a chat with Bill Chennels at Colt Engineering Inc. telephone 353-9305, he will tell you all that happened in his (very similar) case, as he has obtained a judgement already - he is trying to get the money out of McNeil, who seems to have disappeared. I think Bill also has the original contract, I sent it to him on 1984-07-09. I would suggest that you also take that to court.....

Going through the green pamphlet - page 8 and 9, I am not sure whether this is a case of Contract or Debt. In case of a contract, the contract is there - but it is also a debt.

You may also mention in court that the case is similar in all respects to that of Bill Chennels vs. Jack N. McNeil. Good luck and greetings at home, I will write you a longer letter next time.

*J.A. de Raadt*

Why Eric Schaap? In October 1984, Bill Chennels had just started a part-time position (in an oil recycling operation) for a firm called Colt Engineering Inc. After more than a full year of unemployment, he was glad to be "very busy" and did not want (nor could afford) to take time off. Bill had already been awarded his "**Certificate of Judgment in default of appearance**" by the Small Claims Division of the Provincial Court of Alberta, and had had problems collecting. I asked Eric Schaap because I could not (nor afford to) fly all the way down from Whitehorse, and so he went to Court after getting my original contract from Bill. As a result, on 26 October 1984, the Deputy Clerk also sealed a similar Judgment for me, against Jack K. McNeil.

Obviously, I then had to collect. But just like Bill Chennels had already discovered, this proved to be "impossible". Jack K. McNeil was "hiding in Regina or somewhere" (as he had written to me already), while the residence at 1227 Nicola Place NW, Calgary, T2K 2H7 was...**owned by his**

**wife!** It had all been in vain. But on 27 April 1985, when already living in Yukon for almost a year and a half, I had had enough of the nonsense of trying to collect an outstanding debt of \$ 1204 from someone in Saskatchewan. So I did a very logical thing - which comes to mind every spring when it is Income Tax season. "Is there no way to offset a "Business Investment Loss" and get some relief from the Canadian government?" I wrote a letter to find out about such things, (see **below**), which was only a kind request for one of Revenue Canada's Interpretation Bulletins. I cannot remember what the answer was ..... and this is the last letter on the (**appropriately black coloured!**) Bartex Barter Systems Ltd. folder that I have kept for so long. It is my wish that someone may somehow learn from these experiences.

Information Centre,  
Surrey, B.C.,  
V3T 5E6

1985-04-27.

Income Tax; Social Insurance number [REDACTED]

Dear Sirs,

I would like to obtain from you Interpretation Bulletin IT-484, "Business Investment Losses", and would at this stage already like to find out from you whether the following loss is allowed (under line 217 or line 252 or 253 of the Return):

I invested \$ 1000 in a company which turned out to be a sham. I had this invested for a year, with a proper agreement, but when it was not paid out (with interest), I went to the Small Claims Court in Calgary and received a judgment, which has now been filed with the Court. However, I have little chance of ever recovering my loss, and it seems as if the company does not exist any more and the individual is also gone with the wind.

Please rush this interpretation bulletin to me, so that I can still include information in my 1984 return.

Yours truly,

Jacob de Haadt.

Address: 5 Bamboo Crescent,  
Whitehorse, Yukon,  
Y1A 4V4.

(Letters typed on the Remington 12 typewriter that I had purchased in Pretoria for R5 during my student days.)

In early 1983 (April or May?), when it became general knowledge that more and more professionals were laid off (or unemployable?), APEGGA, the Association of Professional Engineers, Geologists and Geophysicists of Alberta, decided to waive that year's membership fees for its unemployed members, **provided** that anybody claiming this **fee benefit** would first attend a free single day Seminar in a meeting room in one of the downtown Calgary hotels. (A similar seminar was held in Edmonton.) The response was a great surprise to the "human scientists" who had been hired by APEGGA so that they could tell the engineers (of all sub-disciplines) "**how to improve your résumé, how to write an irresistible application letter, how to prepare yourself before an interview, how to conduct yourself during an interview, and how to act after an interview**". The room was packed to almost beyond capacity. Bill and I attended this Seminar that lasted from 9 a.m. to about 4 p.m., (with two coffee breaks and a free lunch). To everybody's consternation, toward the end of the last slick pep talk, somebody sitting behind me, near the back of the room, could not contain himself any longer. "**All you guys have only tried to bullshit us all day**", he passionately said, "**because I can assure you, or confirm to you if you do not already know this: There are NO JOBS at all here in Calgary, NO WORK to apply for, NO JOBS interviews at all.**" The jaw of the man at the lectern almost dropped out of place; he became as white as a sheet, and we, as an almost just as frustrated group of members? What did we do? **We all started to applaud.....!** Is it a wonder that most of the many professionals who had come to Alberta from what I would call "Central or Eastern Canada" just packed up their stuff, and returned to where they had come from?

How did we, **by the grace of God**, live without the regularly expected monthly income based on \$ 3,250 p.m. gross? <sup>135</sup> I guess that coming from South Africa, we considered ourselves somewhat knowledgeable of "self-re-

<sup>135</sup> This was the year that Mayor Ralph Klein referred to the "bums and creeps" sleeping at the C-Train stations.

liance”, “common sense” and “belt tightening”. My parents had not been rich, Lydia’s parents had always had enough to live from (on a Town or later City Engineer’s salary) in a prudent way, – and my Part 1 addressed the municipal engineers’ salary range that my father-in-law took home every month. But we had not been used to visible North American excess spending. We had basic expenses like tithing, mortgage payments, fees for the Christian Schools our children attended, and some music lessons; I had always taken the bus to work at UMA, and we had no cable TV. We had a vegetable garden and we made jam from various berries in the Weaselhead, even from choke cherries. All of our four children had a paper route. We needed to make a decision to cut somewhere, and we took our children to the public schools in Lakeview – mostly because the Christian School our youngest two attend, was moving to a building in the far NE of the City, too far to drive. Since my youth, I have picked up and sold bottles (and even dog bones for South African glue factories), so I continued doing this in the back alleys near our Lakeview house. There was a place on Highfield Road (off Blackfoot Trail) that bought newsprint at \$ 10 per ton. So I loaded the Matador Wagon right up to the ceiling and drove there, getting about \$ 14 a trip, cash. I also picked up old car batteries in the back alleys, and sold them – the price of lead was good in 1983. Liquor and pop bottles, beer and pop cans and bottles, all those things had always been picked up by our family, even when camping in British Columbia. (Very early one summer morning at Kikomun Lake Provincial Park near Jaffray, the children took a large dinghy to Engineer’s Lake, and filled it with beer bottles that were strewn all over the beach, from the previous evenings partying, which we placed in the Hornet and cashed in at Cranbrook.) But I also became a “**dumpster diver**” at a number of grocery stores in SW Calgary, whether Safeway, Calgary Co-Op, or other chains. I had an almost regular route – to save gas on a 6-cylinder station wagon – and always returned home fully loaded. I am not exaggerating if I state that we rarely bought any groceries after having been laid off, and – we ate very well: **Buttermilk and Yoghurt** (of all flavours), **potatoes** (a whole bag had a single rotten one), all kinds of **packaged pasta** (just past the due date), **cheese** (of all normal and exotic kinds), **bananas, apples, oranges, pears** and a variety of slightly dented **food cans** (with labels). We never knew how much stuff was just put in the dumpsters, and note that in 1983, there were no huge garburators close to the open containers that would compact the stuff. I believe that I was not the only person doing this necessary (but unprofessional?) work. There were at the time some people (and I met them) who were thinking about a very novel idea – called a “**Food Bank**” – and if I am not mistaken, the very first one in Canada was started in Calgary in 1984. These days (2019), every city, town and village in Canada has one, and the quantity of “food being thrown out” has probably been diminished by only a little bit. I just cannot see food go to waste; in my youth, I had heard too much about the horrible “hunger winter” of the western Netherlands, 1944-1945. And I know that I am not the only person with that background who thinks this way.

In the school year that started in September 1982, Lydia and I became active in the opposition to close **Clem Gardner Elementary School** in our Lakeview neighbourhood (where Sara and Joss attended). We joined a group of about six or seven strongly opposed people (professionals among them), and I was asked to do some projections of future school attendance (that would put a wedge in the Calgary School Board’s projections that had already suggested that closing would be inevitable). The problem, as we (and I) saw it, was that the whole of Lake-view had been “built out” in a very short period in the mid-1960’s, and as this was the tail end of the “baby boom” in North America<sup>136</sup>, three public and one Roman Catholic elementary schools had been built, and also Bishop<sup>137</sup> Pinkham Junior High School (where Theo and Plonia attended). Fifteen years later, the families with these children had either moved away into newer (and cheaper) neighbourhoods, or had stayed as empty-nesters or “almost empty-nesters”. In early 1983, we were able to make our pitch to the Calgary School Board<sup>138</sup> that Lakeview as a whole was already experiencing some “rejuvenation” and that there was talk of closing the elementary school on the west side of 37 Street SW which was under the jurisdiction of the Canadian Department of Defence as it was on “Sarcee Base”. The possible closure of Sarcee Base was already

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<sup>136</sup> Many other countries (particularly in Europe) and also South Africa, never really had a “baby boom”.

<sup>137</sup> He had been an early Anglican bishop in Calgary, not Roman Catholic.

<sup>138</sup> I remember the name Mr. Darcy McDougall, but may be mistaken.

discussed at that time, and the Sarcee Indian Band wanted the area “cleaned up” from the tons of lead in the old military firing ranges, but the residential area west of 37 Street SW would remain. The Calgary Public School Board seemed to listen, and the result was that Clem Gardner Elementary School was not closed at that time or for many years afterwards, until it was converted into Special Computer School in 2004. Elementary schools in a neighborhood like Erlton (next to the Stampede Grounds) were axed.

In May 1983, an engaged couple in our church planned to get married. **Burt Winkel, P.Eng.**, born and bred in Edmonton, had already been laid off by Bechtel (?) as a mechanical engineer on some Fort McMurray related project that had stalled. His fiancée Miss **Helena Baartsma** hailed from Hamilton, Ontario, and had met Burt in Calgary a few years earlier. She was a competent drafts lady who worked for a firm that designed steel drilling rigs in the Gulf of Mexico, (yes, Alberta did work for US companies in those days) and she was still working full-time at the time. They were to get married around the end of May. Mr. Ralph Winkel, (Burt’s father in Edmonton) and a partner, a Mr. Williams, owned a small chain of 5 gas stations: 2 in Edmonton, 1 in Red Deer, 1 in Calgary and 1 in Lethbridge, with the obvious, logical and quite non-prozaic name “**WillWin Gas**”. Every gas station had an “Operator” who received no salary as such, but only **1 cent per litre** of gas sold, with nothing but two minor Operator’s expenses : **(1)** An AGT account, so that the Operator could make some necessary phone calls: **(a)** to Edmonton about the weekly turnover figures, and **(b)** to phone for a full gas truck when urgently needed. Why? Well, **(i)** all these gas stations were old and there was limited storage capacity (only 3000 gallons, I remember, but I forgot if those were US or Imp. gallons), and more importantly, **(ii)** WillWin had the cheapest gasoline in town – **38.8 cents per litre** – while some other outlets (and one had to search for them) had 38.9 cents per litre and almost all other outlets had 39.9 cents per litre. And **(2)** The Operator had to have some business liability insurance policy, for who knows what could happen at any time.

Somehow, the Operator at the Calgary WillWin Gas was suspected of pilferage, by taking cash from the till – not much, but small amounts on a regular basis. So Ralph asked his unemployed son Burt to go and check out what was really happening. (Playing dumb of course, because he is the Owner’s son, supposedly under a cloak of ignorance or assistance, at first.) And yes, the alleged theft from the till is proven. So without further ado, Mr. X is immediately “**out**” and Burt is asked to take over; he’s unemployed, you see, and able bodied. But then one problem arose: Burt and Helena had already booked their honeymoon – I cannot remember where it was, and for how long. Fortunately, at that occasion, Mr. Winkel had a brainwave – to ask Jacob to take over during their time away. I was able bodied, a professional engineer, and my response was almost something like “Barker is willing” from Charles Dickens’ book “David Copperfield”. (A pun after my Bartex experience?)

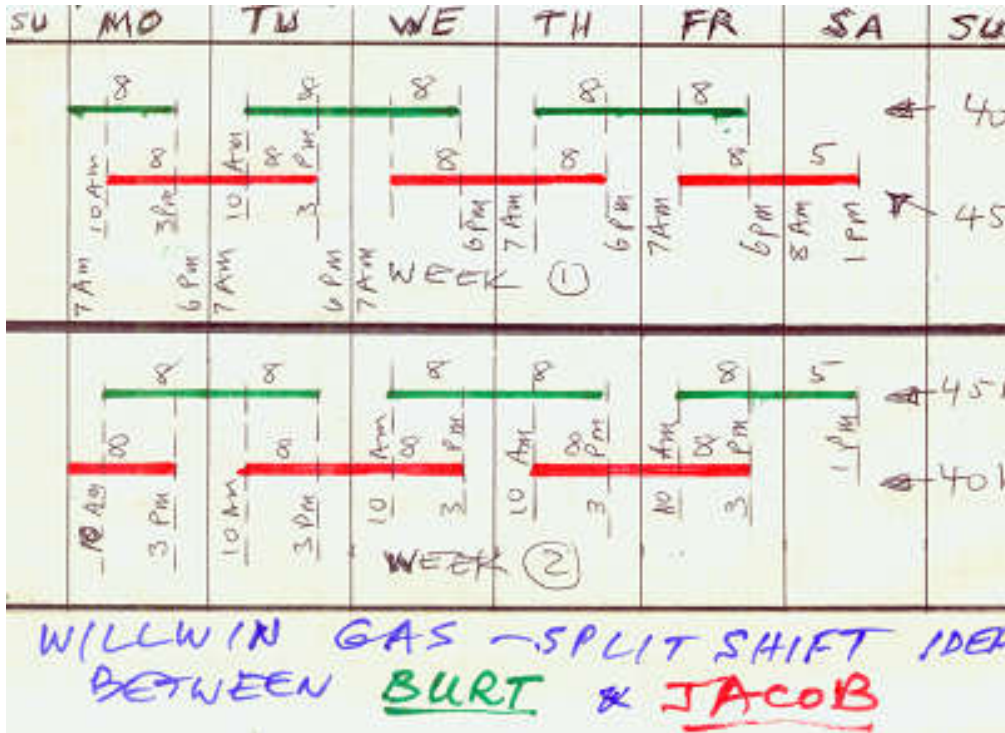
After Burt and Helena’s return from honeymoon, a simple Agreement was written up for us, as “**Joint Operators**”, and this set us going, taking over an enterprise with a monthly turnover of  $\pm$  **159,000 litres** of gasoline per month at a run-down place. This “enterprise” made us earning a bit more than the E.I. benefits we had both been receiving for a while. Obviously, we both continued to apply for all kinds of professional engineering positions, and knew quite well that this was “only temporary”. I realize (and Lydia agrees) that Burt actually hated this type of work, but (very stoically) did not show it even once. For me, it was yet another situation to learn from; perhaps because I was about a decade older than Burt. As such, I have never felt ashamed of having pumped gas halfway my professional career; I have always shown it on my résumé, and in 1984 even prepared a Toastmasters speech (my “Ice Breaker speech”), with which I won a club and interclub speech competition in Whitehorse – with the catching title “**Are you a filler-upper, sir?**” (Most people filled up their vehicle’s tank in those days, just as they do today) In late August, I was finally successful with a job application; an interview in faraway Whitehorse led to a job offer as “Program Engineer III” for the Government of Yukon.



Two professional engineers operating a gas station.

WillWin Gas, looking west, toward Mcleod Trail.

At left is a photo of Burt (at left) and me, taken by my father-in-law during Lydia’s parents’ visit to Calgary in August 1983. We only had six pumps (on two islands) and a single grade of unleaded gas. The complex (at right), next to the C-Train, opposite the Holiday Inn) has now long been torn down; the building had Labbe Bedding as its main tenant, on the SE corner of Mcleod Trail. The west access was close to the traffic signal, the east access was close to the C-Train level crossing, where traffic sometimes blocked up. (I need to express my view on the serious deficiencies of the site, as if I am writing a Traffic Assessment & Circulation Study!)



It seemed easy to split up the  $(5 \times 11) + (1 \times 5) = 60$  hours per week into equal shifts for each of us. At left is a Schedule to show how it worked for a two-week rotation. This only works for two people; for three people, this would be more difficult, and our gas sales obviously could not justify having three people on board. The **early bird** on Monday would empty the till just before 3 p.m., write up the bank deposit slip, while the **late bird** had already come on board at 10 a.m. Between 10 and say 2:45, we would both be running and hopping between the pumps and the till (and back), doing VISA and MasterCard transactions by hand, checking oil or coolant levels, and checking tire pressure. The **late bird** had to close up at 6

Work schedule for two operators, each working 42.5 hours per week.

p.m., prepare a bank deposit slip for a night deposit at the Royal Bank at Mcleod Trail and 50 Avenue SW, and go home. This was not really out of the way for either of us. An important matter was to leave a small amount of “cash float” in the till. On a few occasions, an early customer came with a \$ 100 bill for (say) \$ 35 of gas! We also had to “dipstick” the tanks to check for water in the bottom. And order gas... whenever close to running low.



Willwin in the **red circle**, at the corner of 42 Avenue & Mcleod Trail SW.<sup>139</sup>



Willwin Gas, 1983.

NE of Drumheller, and the next night, on the farm, George placed his full-size grain truck between our soft-top trailer and the wind. We harvested about an armful of ripe sorghum, allowed it to dry at home, ground it up in a coffee grinder and ate the porridge. It was quite good, but definitely of a different strain than South African sorghum; we heard that the whole Alberta crop was sold to the breweries, and that it is mostly grown in Kansas, USA.



Our children were superbly entertained by the four Doupe daughters,



Lydia amid the almost ripe sorghum grain,



and I assisted with the harvest of canola, hearing about challenges of agriculture.

Not known to us at that time, that weekend trip to Oyen was the last of many in Alberta, with our small soft-top tent trailer that we had bought for \$ 250. In 1978/1980, we had been successful in getting a “gold medal” for stamping around Alberta’s **fourteen** “travel zones”. First the bronze medal, in 1978, for visiting **six** zones; then the silver medal, in 1979, for visiting **four** more zones, and then the gold medal, in 1980, for the remaining (and furthest) **four** zones. This is how we (and our children) learnt about Alberta (and western Canada). It is my belief that these trips all over Alberta were good for us as a family, still treasured fondly by our four children.

<sup>139</sup> Photo taken from the plane, on my return from Whitehorse in late August 1983.

5423 Lakeview Drive SW  
Calgary, T3E 5S3.

1980-09-21.

Travel Alberta,  
Box 2500,  
Edmonton.  
T5E 2Z4

Dear Sirs,

Please find enclosed our family's Holiday Passport, which we submit for the gold medallion, seeing that we have visited places in all 14 zones in the last three summers.

A few weeks ago, when we were planning our trip to the Columbia Icefields in Jasper Park, I phoned your office in Calgary, where I was assured that stamping facilities exist at the Icefields Centre. Great was my disappointment when I found this not to be the case. I find it strange indeed that no stamping facilities exist at such an attraction, it is even mentioned in the Passport itself. In Banff Park, I found that stamping facilities were available at Banff, Lake Louise and even Mount Wilson Lodge.

On arrival at the Columbia Icefield, I therefore requested the receptionist at the Icefields Centre to stamp my passport with the Jasper Park stamp and the date. Although I realize that this is an irregularity, I consider that this may be overlooked by you, and that you will nevertheless award our family the gold medallion.

We only arrived in Canada in December 1977, and would like to engrave the medallion series with the years in which they were "earned", namely 1978 for the bronze, 1979 for the silver and - I hope - "1980 for the gold".

Congratulations with the idea and the literature available and the kind people in the information booths everywhere - we really enjoyed travelling through Alberta,

Yours very truly,  
*J. A. De Raadt*

A..... <i>Bia. (1)</i> ..... MEDALLION HAS BEEN AWARDED DATE <i>May 22/78</i> TRAVEL ALBERTA	Valid until Dec. 31, 1980
A..... <i>510 (1)</i> ..... MEDALLION HAS BEEN AWARDED DATE <i>Dec. 31/77</i> TRAVEL ALBERTA	Name <i>J. A. DE RAADT</i>
A..... <i>610 (1)</i> ..... MEDALLION HAS BEEN AWARDED DATE <i>Sept. 25/80</i> TRAVEL ALBERTA	Address <i>7536-39 AVE NW</i>
	City or town <i>CALGARY</i>
	Postal code <i>T3E 1X2</i>
	<i>5423 LAKEVIEW DRIVE SW</i> PLEASE PRINT <i>T3E 5S3</i>
	<small>(You may wish to paste in your own or your family photo for identification purposes)</small>

On acceptance of my Offer of Employment in Whitehorse, I decided to just "give away" my 50% share in the business called "Burt and Jacob" to Eric Schaap, a former salesman of standby generators for a country-wide firm called (GM) Waterous Diesel Systems. He had already been laid off for more than a year, and his E.I. benefits had expired. (The oil industry was so flat that nobody wanted to even think about buying standby generators.) His chances of employment in Calgary were really grim, and he had to support a large family.<sup>140</sup> The business continued as "Burt and Eric" until the summer of 1984, when WillWin Gas was sold to the (still existing) FasGas. The October 1983 sales

were already over **290,000 litres**, meaning \$ 1,450 gross for each of Burt and me. What I really learnt from the WillWin experience was that "customer service" actually counted; it was not only that price difference of 0.1 cents per litre, but the fact that everybody saw us running (or briskly walking) between the pumps and the till inside the building. Lonely people driving around like realtors (and we pitied them) wanted to talk to us, about almost anything, while the hose was running. Self-serve was not encouraged; we sometimes allowed well-known customers (like the inherited fleet operated ones on Saturday) to start pumping, but we never had someone completing the pumping or taking off without paying. We accepted cheques and noted down driver licence numbers, but we encouraged both credit cards, which we had to swipe on one of those machines that I have not seen for a number of years. **Technology was changing**, and rapidly. One afternoon, in the parking lot of the Royal Bank on McLeod Trail, I noticed about 50 IBM "card readers" that were obviously going to the dump, collected from all the (Royal) bank branches in Calgary. That was the last time I saw any of those. "How old would they have been?", I wondered. Fuel pumps were also changing already in those days; we had only one pump repair during my 4 ½ months stint. They were of the old type, which we now only use when filling up at Riverside, Washington State.

Earlier that summer, my brother Arie and his wife Kathryn, with two children (Sebastian and Sarah) and Lisa, Kathryn's daughter from a previous marriage, visited us from Berkeley with a yellow Volkswagen Combi.

<sup>140</sup> His wife Boukje Schaap was our daughter Plonia's first piano teacher. We later re-met the family in Langley, B.C.

I distinctly remember that on the day of my interview in Whitehorse, I travelled by bus from Whitehorse Airport to the downtown, via Two Mile Hill. Asphalt paving occurred that day, and the temperature was 31°C. Brad Taylor later confirmed this to me. Nice weather. As soon as I had been informed by letter that I was offered a position by the Government of Yukon, and had accepted the position from my side, we were asked to come and have a look at housing, all trip expenses paid. So Lydia and I flew to Whitehorse, stayed at the Ben Elle Hotel, and were able to purchase a house at 5 Bamboo Crescent, Porter Creek. This house was listed by a miner who had been laid off<sup>141</sup> and the family was returning to Ontario with a van and their personal belongings. The house was about six years old at the time, and they had been its first occupants. It suited us nicely, we thought. We had to pay a deposit, and that was just doable (from our investments!) but once again, we needed a second mortgage. But we struck a deal and decided on an occupancy date of 1 December 1983. That was the earliest possible date, and I knew that we would need to make some living arrangements for November, as I would start working on 1 November. (On arrival, we agreed with the vendors that our Kenmore freezer and some larger items could be placed in the basement.) We did not even try selling our house on Lakeview Drive SW, as we realized that there were just too many houses for sale, so we decided to try renting it out, through a neighbour (from the Clem Gardner School committee). At first, we seemed to succeed with a tenant who was supposedly “employed” by Culligan Water Systems, but he disappeared after a few months. The house stood empty, and our good neighbour who lived around the corner on 54<sup>th</sup> Avenue SW then suggested by mail that we retain an Agent who would “take” only 3% of the monthly rent. Our rental problems continued for seven years, with dishwasher replacements and a tenant’s parrot eating through the electric cords for the living room lights. We were only able to sell the house after we had moved to Matsqui in British Columbia....

We were sad to leave the many people we knew in Calgary, some of whom (in our church) we had known for almost six years. An oil geologist had gone to a position at Balikpapan in Indonesia, and many others left Alberta (and particularly Calgary) at that time, like John Moelich who left for Ontario. One elder in the church suggested not to go to Yukon, though: – **“because there is no church there.”** This in passing; he later also left Calgary, returned with wife and four children to the Netherlands. Theo had just started Grade 10 in the International Baccalaureate program at Central Memorial High School, Plonia was in Bishop Pinkham Junior High School in Lakeview, and Sara and Joss obviously in the close-by Clem Gardner Elementary School,



On the way to Whitehorse, Yukon, near Trutch Mountain, on the Alaska Highway, British Columbia, with Buffy likely in the vehicle.

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<sup>141</sup> I do not know if this was when Whitehorse Copper closed down, or from work at another mine in Yukon.



## Chapter 4 – The first two months working for YTG (Nov.-Dec. 1983).

After more than a year with a lack of gainful professional employment in Calgary, Alberta, the cause of which is well known as it was Western Canada's most severe recession to date, I succeeded with an application to the Government of Yukon (YTG) for a position called "Program Engineer III", in the Territory's capital. My first day of work there was during the first week of November 1983. Lydia and I travelled with four teenagers and a dog, by a road that crossed the 60<sup>th</sup> parallel on the 31 October, after we had stayed over in motels at Edmonton, Dawson Creek and Ford Nelson. That night, **totally shaken up**, we lodged in a motel at Watson Lake, where we needed to get proper winter tires the next day for our red AMC Matador wagon. Why? The day before, near Iron Creek (still in British Columbia) we had slipped on black ice, so that the vehicle was suddenly facing backwards and its front end was already over the edge of the shoulder. God protected us that day (and ever since!): I could just put the car in reverse gear and back up from the scene of what could have been much worse.



Photo of the Lynn Building in early 1984.

At work, I met all those who would be working with and for me for the next five years, two months and a week. The YTG's Highway Engineering office was at 308 Lynn Street, in a steel framed four storey building, my office in the Highway Engineering Section was on the third floor, with a west-facing window. The Highway Maintenance Manager (**Ray Magnusson**) and two of his Superintendents (**Colin Yeulet** for western Yukon) and **Gordon Eftoda** for eastern Yukon) were on the fourth floor. Mr. **Larry Blackman**, P.Eng., (Deputy Minister) had a street-facing office on the second floor. The Airport Manager (**Nate Casselman**) was in the back of the main floor, with Motor

Vehicles Branch staff. The Mechanical Manager (**Dick Arnold**) had an office at the works yard on Industrial Road; others like the Assistant Deputy Minister (**Kurt Koken**) and tendering / project administration staff, (e.g. **Dave Parfitt**) had their offices in the modern YTG building near the Robert Campbell bridge.

After being accommodated for a few days at the Ben Elle Hotel, our truckload<sup>142</sup> of goods arrived and was mostly delivered to a house at 19 Pelly Road in Riverdale for the rest of the month. This vacant YTG owned house was sometimes used in situations with new employees like us. So we knew that we had to move again on 1 December, which we did. We noticed the poor air quality in Riverdale, where many houses had wood heat and "inversions" often cause poor visibility. I used Whitehorse Transit to work, and they still had one lime-green Fleury motorhome in service, which (I later learnt) must have been just before it was scrapped. One of these buses is now in the Yukon Transportation Museum. Lydia drove our children to school those few weeks.

At work, some strange situation developed about my actual position status: Was I a "management" employee or was I a "bargaining unit" employee?<sup>143</sup> I believe (and still believe) that I had at first been advised (or had received the impression) of the former, but no, in mid-November I was asked by Ms. Shelley Aucoin: "Where is your timesheet, Jacob?" Wally Hidingier had said that I had to fill in that form, and after consultation, Mr.

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<sup>142</sup> It was actually a half load; someone else's stuff was also in that trailer, with our soft-top trailer slung from the ceiling.

<sup>143</sup> At the RTAC Annual Meeting held in Winnipeg, (in September 1985?) I met a Mr. Hein, who told me that he had been my predecessor, but only for a month or so, because when he heard that he did not have a "management" position, he had questioned the "legitimacy" of his hiring. On hearing that it was that of a "bargaining unit employee", he had just quit and returned to where he had come from. When hearing that, staff relations had already become difficult for me, but we were not in a position to leave Yukon.

Larry Blackman had confirmed it. Only much later, this became to be seen as a problem, which in a strange way, I may unwittingly have reaped the benefits of!<sup>144</sup>

After my year of professional non-employment, I was quite glad with the heavy workload in the office; my position had been vacant for a while, and two Program Engineers II only came “on board” in early 1984. I was told that both of these positions were not “permanent” positions like mine, but “term” positions, because of their specific duties and job descriptions: **John Murray**, P.Eng., (for 5 years) for the Dempster Highway in Northern Yukon, and **Robin Walsh**, P.Eng., (for 3 years) for the South Klondike Highway from the Alaska border, through its portion in B.C. and then on to the Alaska Highway just east of Whitehorse. Those were both DIAND funded projects. **Walt Gutowski**, P.Eng., a Project Engineer II, had worked for YTG for several years already, and he was under my direct “line authority” as it is called. I also had three very capable Engineering Technicians III working for me, (**Florian Vedress**, **Brad Taylor** and **Chester Kelly**), two Engineering Technicians II (**Doug Andrews**, who ran the Soils Lab, and **Eric Becker**) and two recently-hired Engineering Technicians I (**Stuart Drummond** and **John Cross**),<sup>145</sup> I understood that during the summer months, many “casual employees” would be added to those “core employees”. My direct supervisor was **Wally Hidinger**, P.Eng., an Electrical Engineer) while Ms. **Shelley Aucoin** was the “Jill of all trades” – her desk was in the huge centre section left off the hallway; Wally, Walt and I had private offices<sup>146</sup>, and the technicians were in a large adjacent room with drafting boards. When John and Robin arrived, from Ontario and Alberta respectively, their offices and those of their technicians (also “temporary”?) were on another floor.

**Rob Harvey** was one of those “temporary” technicians, to be reporting to John Murray, and his office was still on the third floor when I came. He offered to lend me an old pick-up truck to haul firewood from the large burnt-out area along the Alaska Highway west of Whitehorse. This firewood was free, but one needed a permit from the Federal Government, (DIAND). On a Saturday in early December, our son Theo (15½ at the time) and I went out and got the wood. On our return, near the Klondike Highway intersection, the truck’s rear axle came out, and we were just able to move it onto the shoulder. A passer-by then suggested to take a single log, fasten one end of it to the truck frame and place the rest under the rear axle, rendering the right side of the pick-up truck into a sled, with a single driving wheel on the left side. A kind of “Travois”, a real original Canadian mode of transportation, so to say. We did this, and made it to the very nearest garage (and was it was on the highway near Crestview, or at the Kopper King?) That was my first trip (not work related) west of town.

My initial trip north of Whitehorse, to oversee repairs to **Crooked Creek Bridge** near Stewart Crossing, also occurred in December 1983 as a two-day trip which was the first of many to follow of longer duration. Due to the context with other projects, it will be more fully described (Deo Volente) in Part 4.

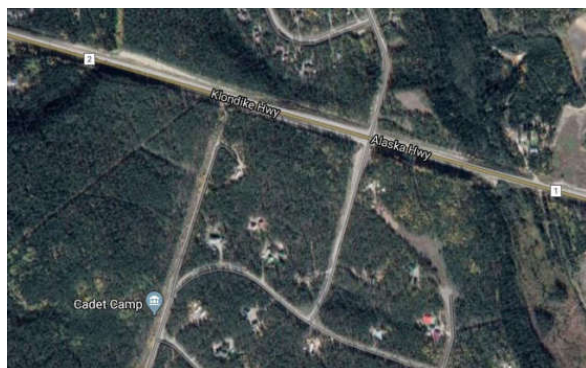
In early December also, my first trip south of town was when I sat in a pick-up truck on the Alaska Highway for a few hours, checking on the stopping sight distance (SSD) and the adequacy of an existing intersection for an access to the proposed Mary Lake rural subdivision. I was asked to do this by Wally and **Mark Hambridge**, MCIP, of the YTG Lands Branch, (Community Services Department?) who had suggested that a brand new access road be built, while someone else had suggested using the existing access road to a Youth Camp (Scouts Canada?) directly south of the Wolf Creek subdivision. My calculations showed that this existing road location

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<sup>144</sup> The regulatory discrepancy between Canadian provinces and territories (at that time) was that in the provinces, professional engineers are automatically excluded from bargaining unit positions, while in the two territories, federal legislation allowed this situation. When the real problems started, I had to deal with them through the shop stewards of the union, which acronym I do not recall. But the appropriate surname of the shop steward was Shopland.

<sup>145</sup> Both Stuart and John had already been “casual employees” for a few years.

<sup>146</sup> My office was more private than theirs; they had a door and a glass wall, but I had a solid wall beside my door.



Alaska Highway in Whitehorse, Yukon, at the Mary Lake subdivision access.

was “**too close for comfort**” for SSD, due to an existing crest curve on the Alaska Highway to the north, and that a brand new access point further east (to serve anticipated traffic from about 110 residential acreages), was necessary for traffic safety reasons. The details of my analysis showed that using the existing road would be cheaper, but inappropriate. Everybody agreed to my recommendation, for which I had used my skills and the ITE literature, and it dawned on me that this kind of analysis had never been done in Yukon: Wally had surveyed in Yukon while studying electrical engineering in Saskatoon. After completing his studies, he returned to Whitehorse and became employed with YTG, (developing an in-house computer program for calculating earthworks quantities) and then proceeded going up the ladder – as a professional engineer!<sup>147</sup>

Just before Christmas 1983, the transmission of our AMC Matador wagon broke down in the parking lot of the Hudson’s Bay Store, with transmission fluid all over the packed snow, making the area multi-coloured – black, white and red. It took a long time and agony to get the transmission rebuilt (and it cost a lot, because parts were not readily available, and when they were, had to come from Ontario!). Fortunately, I could use the Whitehorse Transit bus to work (from a bus stop next to our house). Theo could use that same bus, transferring downtown to FH Collins High School, Plonia attended Porter Creek Junior High School (within walking distance), and Sara and Joss attended Jack Hulland Elementary School which was also in Porter Creek, across an iced over lake. So Lydia sat at home all day long, started to get “cabin fever” and (being qualified) then applied for a part-time job at the Whitehorse Public Library, which was also part of YTG. She was successful and was a YTG employee even longer than I was (really!), until mid-August 1998 when we crossed the 60<sup>th</sup> parallel again (south of Watson Lake) passing the ghost town of Cassiar, through Smithers and Prince George, to the Lower Mainland of British Columbia. But I am running ahead of the story in this Part 3.

Winter work was almost entirely design-related; the field surveys from the previous summer had to be used for the designs and plans for highway construction projects, Schedules of Quantities and Tender documents were to be prepared. I assisted with some minor things for the South Klondike Highway and the Dempster Highway before the arrival of Robin and John. The other persons who we met after our arrival on Bamboo Crescent, were Mark and Nora Hambridge. Nora’s parents lived in Calgary and had sent a few Calgary Herald newspapers. She shared them with us; to our astonishment, there were Foreclosure Notices for 94 properties in a single newspaper. We were still trying to rent out our Calgary house!

But we settled in with our children and our terry-poo called Buffy, in a very comfortable house with an oil / wood combination furnace in the basement, some triple pane windows in the living room, and found that the house was quite liveable, although I already missed having a garage. There was not even a carport as we had had in Lakeview, only a steep gravel single driveway! But the Lord had provided, and would provide, as He has promised in His word. With the words of Psalms 90 and 91 (the real **New Year’s Eve** and **New Year’s Day** psalms), we closed that memorable year 1983, and on that note, I would also like to end this Part 3.

JAdR, 2020-07-30.

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<sup>147</sup> At that time, the regulations of APEYT did not distinguish between engineering classifications like “civil, mechanical, electrical and mining”, etc. It is unclear to me how Wally could have risen to the position he held, as this would not have been possible in any Canadian province. Training and experience has to be in the same classification of “engineering”.