



# Canadian Rail

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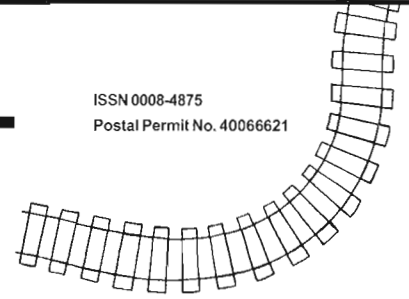
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# CANADIAN RAIL

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*FRONT COVER: Canadian Pacific's train No. 1, the westbound "Canadian" stops at Medicine Hat, Alberta on April 30, 1967. On the right is business car 14.*

*Photo by Fred Angus*

*BELOW: On May 15, 2003, Sydney & Louisburg car No. 4 became the first exhibit to be moved into the new ExpoRail building at the Canadian Railway Museum. A more detailed account of this historic event will be in the next issue of Canadian Rail.*

*Photo by Fred Angus*

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Canadian Rail is continually in need of news, stories,, historical data, photos, maps and other material. Please send all contributions to the editor: Fred F. Angus, 3021 Trafalgar Avenue, Montreal, P.Q. H3Y 1H3, e-mail [angus82@aei.ca](mailto:angus82@aei.ca). No payment can be made for contributions, but the contributor will be given credit for material submitted. Material will be returned to the contributor if requested. Remember "Knowledge is of little value unless it is shared with others".

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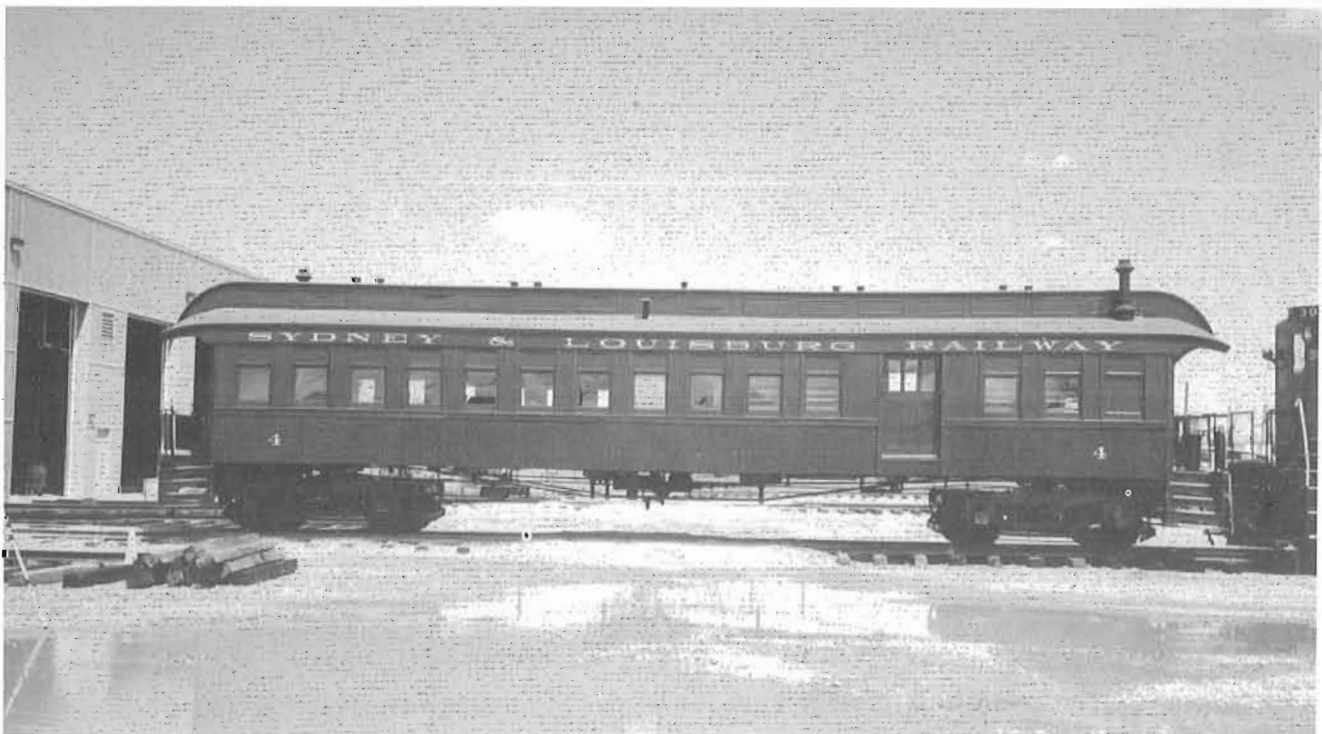
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## The Train Now Leaving . . .

(Or as “The Dream Continues” at the Canadian Museum of Rail Travel)

with Mike Westren



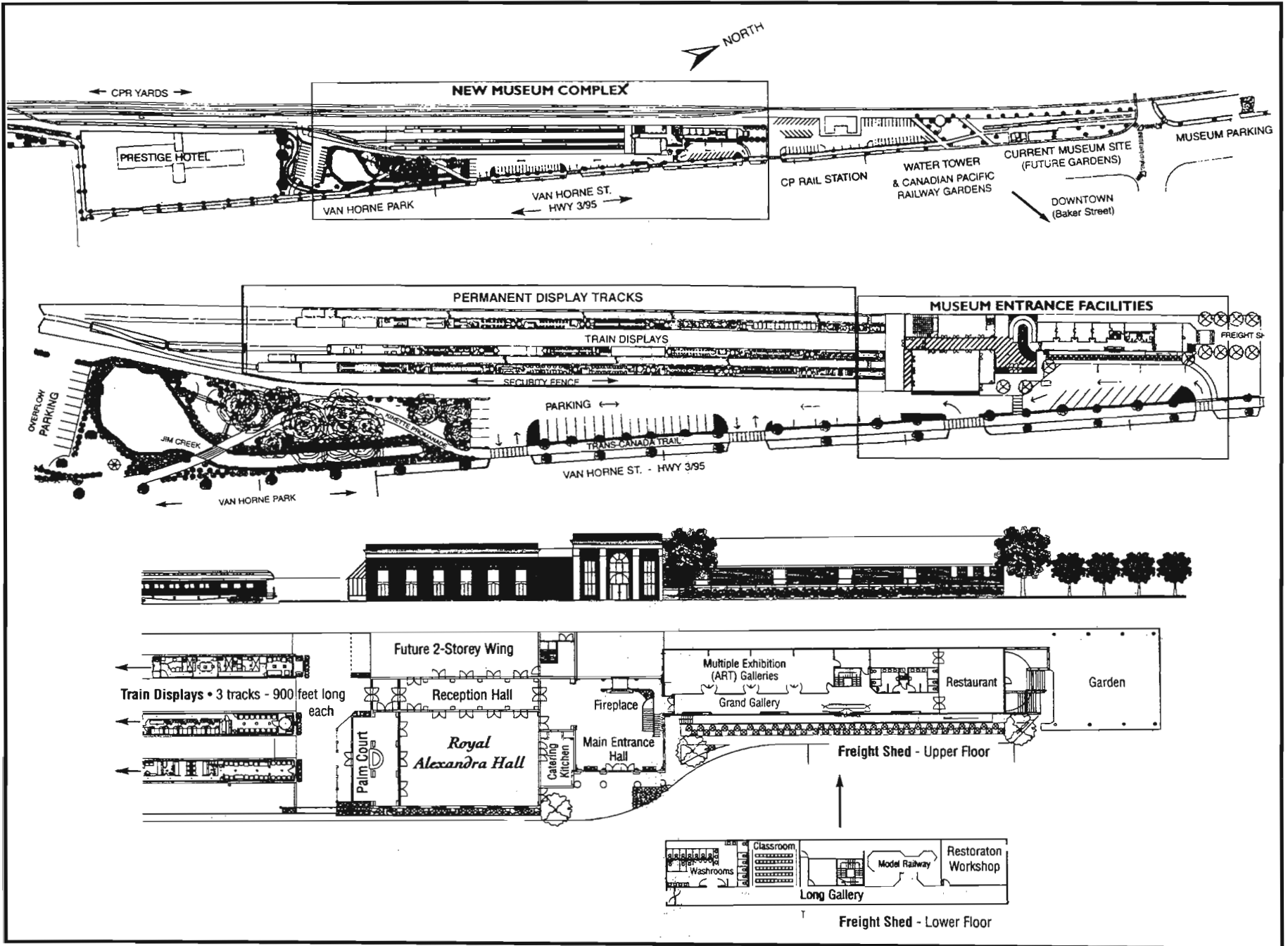
*“River Rouge”, “Curzon” and “British Columbia”; three trains creating the illusion of being poised for departure.  
All photos by Helene and Mike Westren*

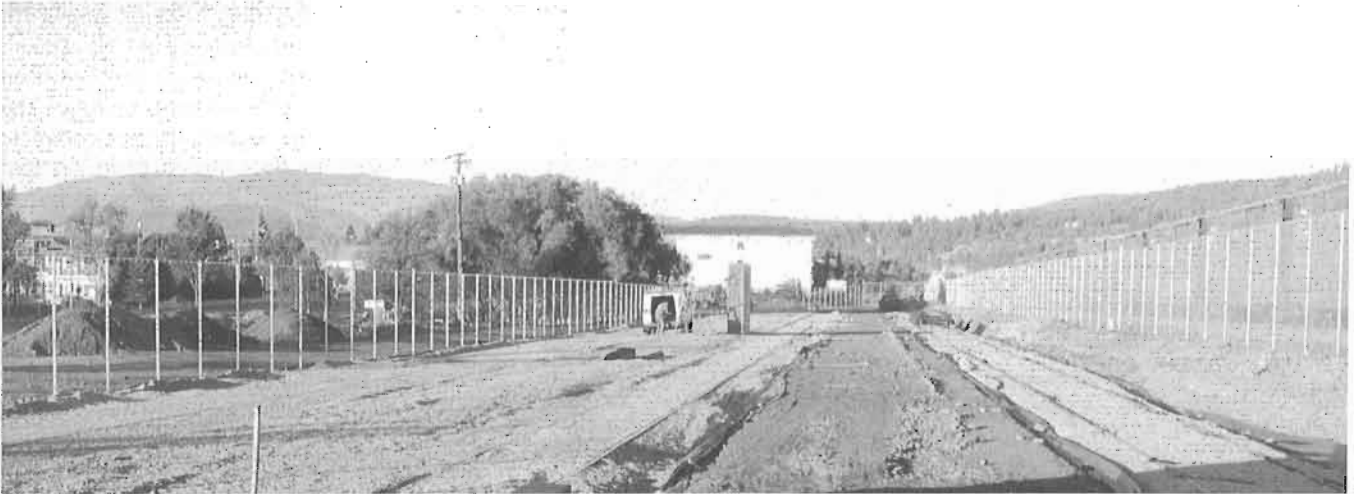
Two thirds of the North American continent apart, very different and very important ‘national’ railway museum developments are reaching critical, definitive stages. In the Montreal area, the Canadian Railway Museum has opened its ambitious new covered interpretive display hall. The CRHA membership has been kept well informed on the progress of this venture. Far to the west, nestled in the East Kootenay region of British Columbia, the Canadian Museum of Rail Travel also has passed a quite remarkable marker board.

Opportunities to see a classic train, stretched out to full length, are indeed rare in North America, or anywhere else for that matter. A few 1950’s era streamliners do operate, such as Union Pacific’s corporate passenger train and the American Orient Express. The Royal Canadian Pacific falls into an exclusive class unto itself. In Europe, of course, the grandfather of them all, the Venice-Simplon Orient Express has always been the standard bearer. In pure heritage preservation terms, the options become even slimmer, which makes the CMRT collection in Cranbrook all the more remarkable.

As “The Dream Continues”, CMRT’s slogan, to come together for the Canadian Museum of Rail Travel, a giant stride was taken in September of 2002. This sizeable collection of passenger rolling stock was united on a fresh, linear site, organized in rational order by train set. A magnificent idea, wonderful vision, this courageous scheme consists of real trains of different eras poised seemingly ready to depart, a grand illusion which really works.

Currently three tracks, with provision for a fourth, create the atmosphere and feeling of a busy railway terminal point, right down on Van Horne Street (B.C. Highway 3) in Cranbrook. Very easy to find, the Museum sits on a narrow strip between the active Canadian Pacific main line and yards, and the trunk route highway. Buildings have been architecturally purpose designed to promote the “Grand Union Station” experience. A huge carved oak fireplace, from Winnipeg’s Canadian Pacific “Royal Alexandra” Railway Hotel confronts the visitor at the entrance hallway. To the left, the magnificent space of the “Royal Alexandra” cafe / dining room came from the same hotel, demolished in 1973. This





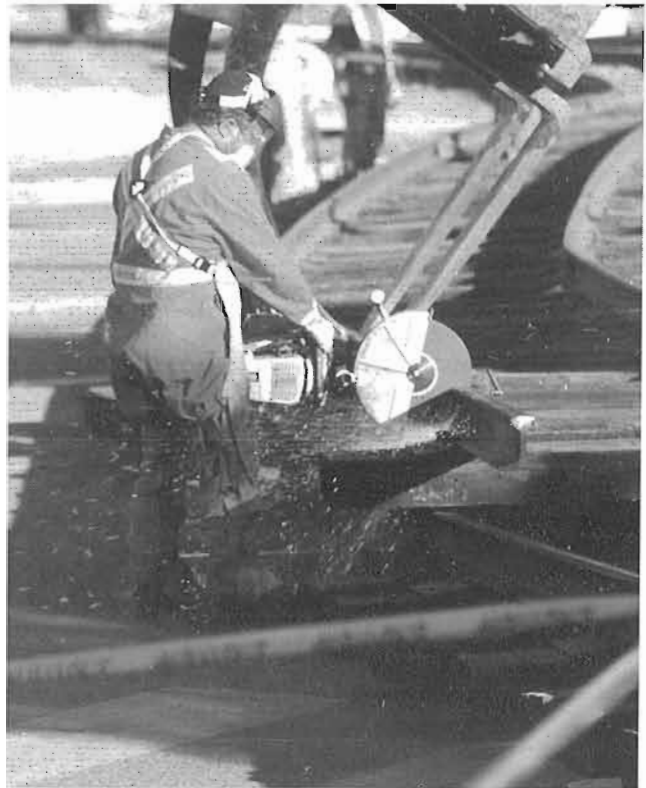
*The new site almost ready to receive the collection of heritage passenger rolling stock.*

alone provides a valuable local resource for functions, weddings and conferences. Further excellent facilities may be found to the right, where the original long CPR freight shed has been raised onto a new concrete foundation basement. This creative building complex has to be the subject of an article unto itself.

Before going into the mechanics and logistics of the move, just what are these trains, and why are they important? This collection goes beyond the normal display of powerful locomotives, private cars and cabooses. Here everyone has the opportunity to experience the golden age of passenger rail travel, when getting there was possibly as important as the destination. It provides a lifestyle experience, admittedly more likely to have been enjoyed by the more affluent or better off traveller. Nevertheless, it harkens back to the almost mystical romance of travelling by train.

Pivotal to the collection, the jewel in the crown and in truth where it all began with respect to CMRT, has to be the Canadian Pacific 1929 TransCanada Limited. Now all seven representative luxury heavyweight steel cars are marshalled in a single long line for permanent display and interior guided tour. Carrying the markers is solarium-lounge 'River Rouge', next ten compartment sleeper 'Glen Cassie', 8-2-1 sleeper 'Rutherglen', 12-1 sleeper 'Somerset', dining car 'Argyle', full parlour car No.6751, combination baggage sleeper No.4489, and finally a high capacity tender. Ultimately a locomotive, possibly a heavy G3d class Pacific type, could complete the line, almost 800 feet of solid train. Elsewhere, modernized R-sleeper 'Redvers' resides on Track 2 with other interpretive cars. Full baggage No.4480, originally a combination baggage sleeper, has been made redundant by No.4489. Before the move No.4480 housed a fine HO model railway layout; this is now being rebuilt into the freight shed basement alongside the restoration shop.

Track 2 begins with a four car set off the 1907 Soo-Spokane Train Deluxe, the "Spooky Flyer". A consist made up of a combination of both Canadian Pacific and Soo Line cars, this train actually ran through the Crowsnest route and Cranbrook when in service. The beautiful wooden



*A rail on a track panel requiring adjusting as it is placed on King Street.*

observation lounge sleeper 'Curzon' nudges up to the stops, the striped awning fringing the open platform roof gently flapping in the breeze. Next the palace sleeper 'Omeemee', both these are Soo, preceded by CPR first class coach No.621, body only, and head-end baggage No.4144. These cars could best be described as fragile but stable. Even more fragile are two representatives of the 1887 Pacific Express: CPR first class coach No.52, body only, and Intercolonial baggage No.8027. Interpretive or educational cars fill out Track 2: CP wood caboose, CPR sleepers 'Naughton' and 'Redvers', plus VIA ex-CN cafe lounge No.758.



*A heavyweight car crosses the track panels out of the old site.*

Bringing up the rear on Track 3 is the open platform end of 1928 superintendent's car 'British Columbia'. The 12 compartment sleeper 'Grand Pre' had the singular distinction of being part of the 1939 Royal Train, and plans are to return it to the splendid royal blue and opal livery applied on that occasion. A 1936 lightweight Chinook set is next: mail express No.3612, baggage buffet No.3051, day coach No.2104, and smoking car No.1700. These are all shorter length cars. Finally the sleeper 'Newcastle' and FP9A / F9B pairing of CPR Nos.1409 and 1901 fill out Track 3.

The CMRT collections policy calls for an ultimate Track 4 to eventually receive an officially preserved set of Budd stainless cars forming a representative Canadian train as introduced in the mid-1950's.



*"British Columbia" bringing up the rear of the first cut of cars out on to the main line.*

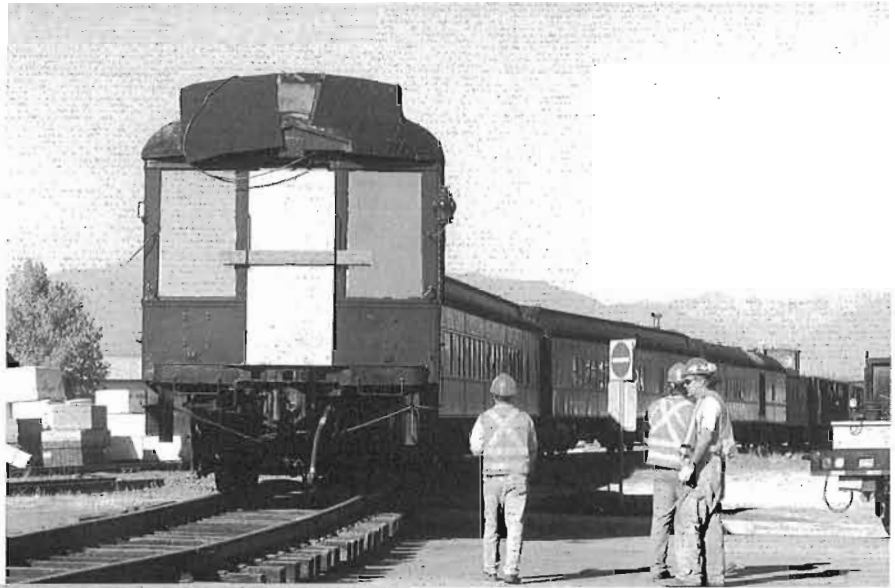
Three days, 11, 12 and 13th September 2002 were crucial in "The Dream Continues" process. So much that had been researched, gathered and built up since the idea of assembling and restoring a complete 1929 TransCanada Limited train set had germinated in the 1970's, was reaching crescendo levels this very hot week in late summer. In preparation for this bug move, three parallel display tracks had been laid on the new site space. Construction continued at full pace on the new museum building complex. Now the CMRT collection could be rounded up and congregated in a single location. While the core pieces were clustered around Elko Station, the original museum site, other components were scattered around Canadian Pacific's Cranbrook Yard. Two valuable car bodies were tarped up in the City's compound. All these could now come together

in logical order and occupy permanent display tracks.

Early in the morning of Tuesday 11 September, King Street was closed to traffic for two days. Local CPR crews hauled in track panels to construct temporary connections between the original museum site and the active main line. This little exercise had to be repeated four times over the next two days to release all cars from the Elko Station site. Once the stub tracks were emptied, but before the temporary connection was finally dismantled, an A & B pair of elderly Alco cab units was gently backed onto the one track designated to remain in front of Elko Station. This part of the original site, with station, water tower, diesel locomotives and railway gardens will remain.

The various trains were then assembled on the main line, cars turned where necessary, and marshalled into the order intended for permanent display. The form of this has been described earlier in the piece. Note that this would likely be the first time in over seventy years that a complete set of the 1929 Trans Canada Limited consist would have appeared and in correct order. Any cars that required reversing were shuttled over to the roundhouse and spun on the turntable.

*RIGHT: "River Rouge" with three more Trans Canada Limited cars crosses King Street.*



*LEFT: GP38-2 No. 3029 marshalling the 1929 Trans Canada Limited on the main line.*

*RIGHT: The full-length Trans Canada Limited train of luxury heavy-weights eases back into Track 1.*





*GP38-2 No. 3029 spots the Trans Canada Limited up to the end stops on Track 1.*

Meanwhile very demanding manual labour was going on to ready the new site to receive the new incumbents. A permanent siding had been built behind the Prestige Inn for secured access. This inn, which anchors the 'museum zone' to the south, southwest, has also adopted an appropriate rail



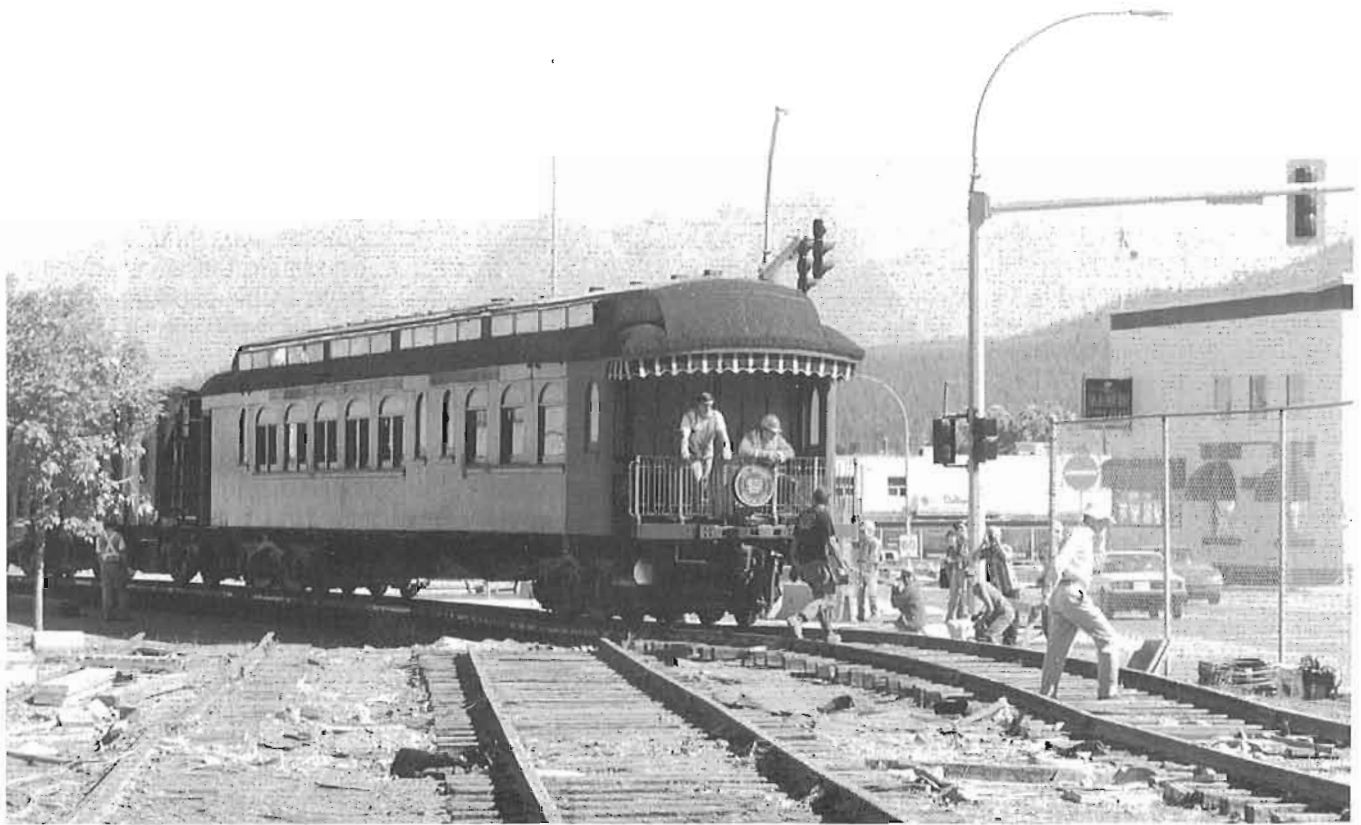
*"Curzon" is the first car to arrive on Track 2 at the new site.*

oriented theme. Moveable temporary rails had to be installed to link up with the display tracks. Fresh gravel had to be spread and dressed before the train sets could be rolled in; access to accomplish this after the cars came in would not be easy. With rails joined to the track closest to Highway 3, the site was ready to receive its first arrival.

Gingerly, GP38-2 No.3029 backed the seven car TransCanada set plus tender over the connection. Slowly the consist crept and groaned its slightly arthritic way in to fill Track 1, the solarium end of 'River Rouge' nudged up to the end stop by the terminal building. It did look magnificent in the noon sun, this line of steel heavyweights with the Rocky Mountains as a backdrop. Twice more the temporary tracks were relaid, and piece by piece the other sets were carefully wheeled in. Eventually all the cars were neatly lined up in their allotted places, the permanent display tracks filled. The temporary connection has now become a semi-permanent link between Track 3 and the outside world. On occasions, various pieces, the Chinook set as an example, get to 'go walkabout' on Company business, so to speak.

Maybe it did take a quarter of a century to reach this juncture. However, enough people believed in the idea, and still do, and were possessed of the tenacity or obstinacy to hang in. From tiny baby steps, getting bigger and reaching this latest giant stride, the dream continues to continue; still many more to go. Central to "The Dream" throughout has been and is CMRT's Executive Director, Garry Anderson, who's efforts and the achievements of CMRT have been recognized by CRHA Awards, among other honours. He has been vital to the inspiration and determination of this remarkable vision and level of development of what now forms the Canadian Museum of Rail Travel.





*Luxury wooden car "Curzon" is the last car to leave the old site.*



*"Alcos at Elko": vintage "A" and "B" cab units are moved back into the old site where they are now destined for long term display.*

So now this part of the illusion is complete, three period passenger trains ready to leave the terminal station. This is a spectacular line-up, and represents an absolutely major achievement on the part of the Canadian Museum of Rail Travel. Everyone should now make a point to go and discover this gem, even if it does mean journeying clear across the country. To use a somewhat cliché and beleaguered expression, this collection is truly "World Class".

Slowly but surely, as we collectively join the dots, a picture emerges. Port Alberni, The West Coast Rail Association in Squamish, Revelstoke, CMRT in Cranbrook, ARM in Edmonton, Saskatoon, and so on to CRM in St. Constant and beyond, the 'small n' national railway collection will come together and will eventually be recognized for what it is and stands for.

# The Lansdowne legend

by Jay Underwood

The power of any urban legend lies in its longevity, its ability to impose itself on the public psyche to such an extent that it becomes impossible to ignore and - once told - spreads as gospel. The story of the "disaster" at Lansdowne, in Pictou County, Nova Scotia has these qualities.

The legend alleges that as many as 30 labourers died while working on the Pictou branch of the Nova Scotia Railway from Truro to New Glasgow, at some time between 1864 (when the province let the contract for the project) and May 30, 1867, when Sandford Fleming, the former chief engineer, completed the task just in time for the line to become part of the Intercolonial Railway, and thus a federal responsibility. (In fact, the line was completed a year behind schedule. The original contract called for its completion "in the most substantial and workmanlike manner" on or before July 1<sup>st</sup> 1866, "to the entire satisfaction of the Chief Engineer for the time being.")

Lloyd MacDonald, of Marshdale, Pictou County, has heard a number of versions of the story. As the custodian of the community cemetery, he needs to know if it is true, because a 30x70 foot lot lies unmarked, the supposed resting place of the doomed workers.

Unfortunately no records exist pointing to the ownership of the lot, or who might be buried in it, but it appears there are several mounds of some antiquity, enough to suggest that a number of bodies were interred at some point.

There is one marker in the cemetery attributed to an accident on the railway, a well-worn stone that marks the resting place of a David Wynott, Ryno or Lynch (the inscription is illegible) who died November 5, 1865. According to MacDonald, the legend suggests this man was a survivor of the accident, who died of his injuries sometime afterwards.

The story came to my attention as I researched the history of the railway for a 1997 pamphlet *Fleming's Way* to entertain patrons of the Maritime Federation of Model Railroaders on an excursion over the line from Truro to the



*Henry Charles Keith Petty-Fitzmaurice, the fifth Marquis of Lansdowne, Governor-General of Canada 1883-1888. The site of the alleged fatal accident on the Nova Scotia Railway, formerly Lairg, was named after him in 1884.*

Nova Scotia Museum of Industry at Stellarton. I was attempting to provide something beyond the conventional histories offered by B.W. Milner (1920) and G.R. Stevens (1964), in the works that have become the accepted accounts, but both of which are subject to some inaccuracy.

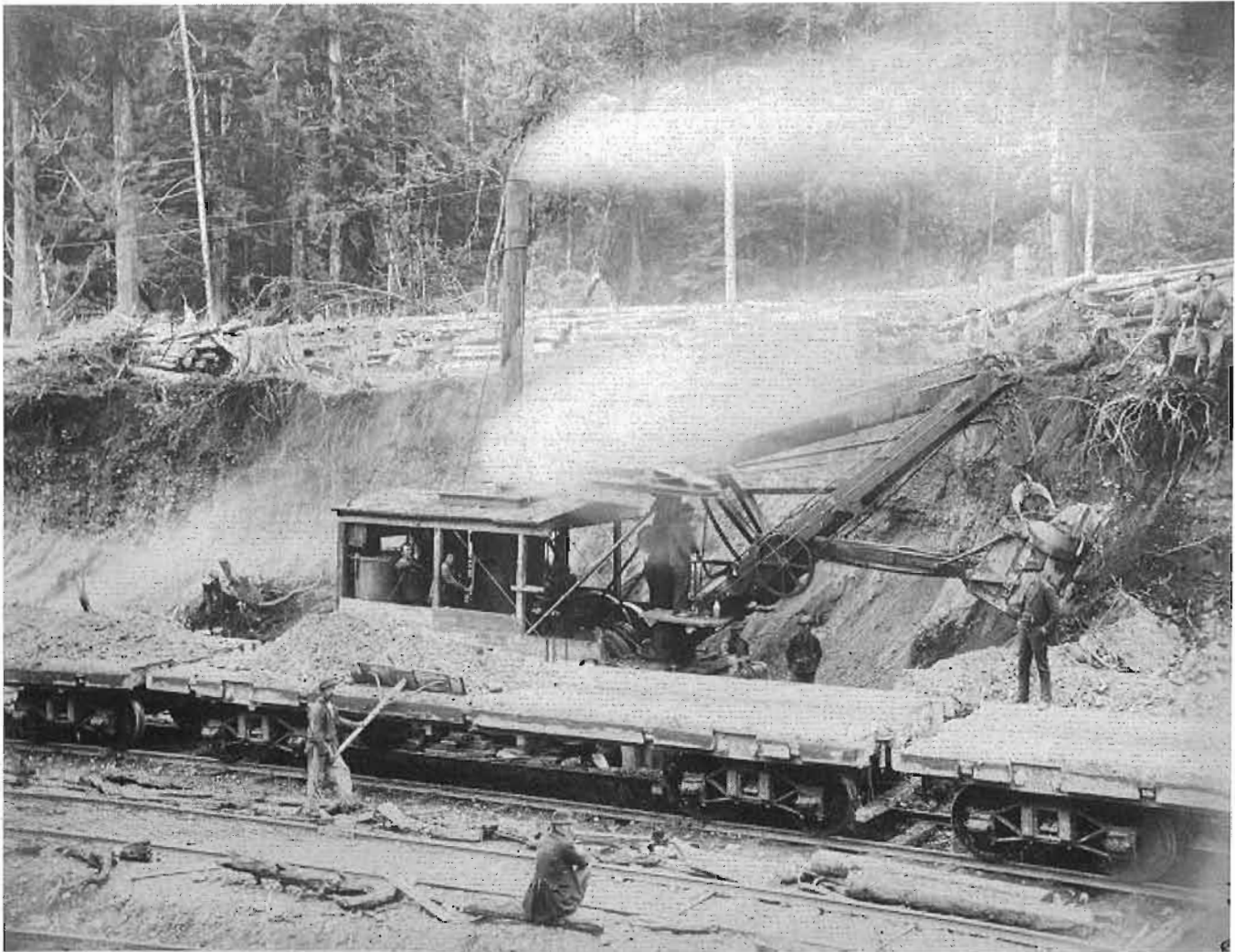
In previous years, as I displayed my working model of the Chignecto Ship Railway at model railway shows in all three Maritime provinces, more than one interested observer would approach me with a version of the Lansdowne incident.

It resurfaced three years after the publication of *Fleming's Way*, with a phone call from CBC Halifax radio personality Bruce Nunn, the self-styled "Mr. Nova Scotia Know-it-All," who specialises in providing his listeners with little known snippets of the province's history. Nunn was seeking verification of the story, and I told him I felt uncomfortable providing any corroboration, and that perhaps two or three deaths might have been considered normal for such a

project. But the persistence of the stories provoked me to seek evidence of the event, if it indeed occurred.

Like most urban legends, the details remain conveniently vague - but with each retelling that I have heard of the Lansdowne affair, something more was revealed that made it more compelling, and worthy of further investigation.

All versions of the event claim that Fleming, then-Engineer in Chief of the Nova Scotia Railway (a widely accepted fact) was under intense political pressure to complete the line before Confederation - that not altogether welcomed union of the British North American colonies which was to be sanctified by the construction of the long-awaited railway between the imperial garrisons at Halifax and Quebec. He was also facing a continuous barrage of criticism from the local press (the *Eastern Chronicle* and the *Colonial Standard*) for having been permitted by Premier Charles Tupper to quit his post as the government's chief engineer to become the private contractor who would finish the job where others had failed.



*One of the Andrew Onderdonk's steam shovels, a Class A model, seen at work in the Fraser River canyon on the Canadian Pacific Railway ca. 1883. BCA Photograph No. 74941. BCA Call No. I-30851 Photo in Onderdonk Album, #5, 17. (BCA Accession No. 98401-006)*

The controversy surrounding Fleming's change of responsibilities created an unusual situation in that the Liberal and Conservative newspapers in Halifax joined in support of Tupper's decision, while the Liberal and Conservative papers in Pictou County were equally united in opposition.

Much of the criticism focused on the autonomy upon which Fleming had insisted, for as Adams G. Archibald asked in the House of Assembly on March 16, 1866:

"Who would now superintend Fleming? His own friends, this man whom he had put on the engineering staff? Was such a state of things calculated to ensure honest dealing?"

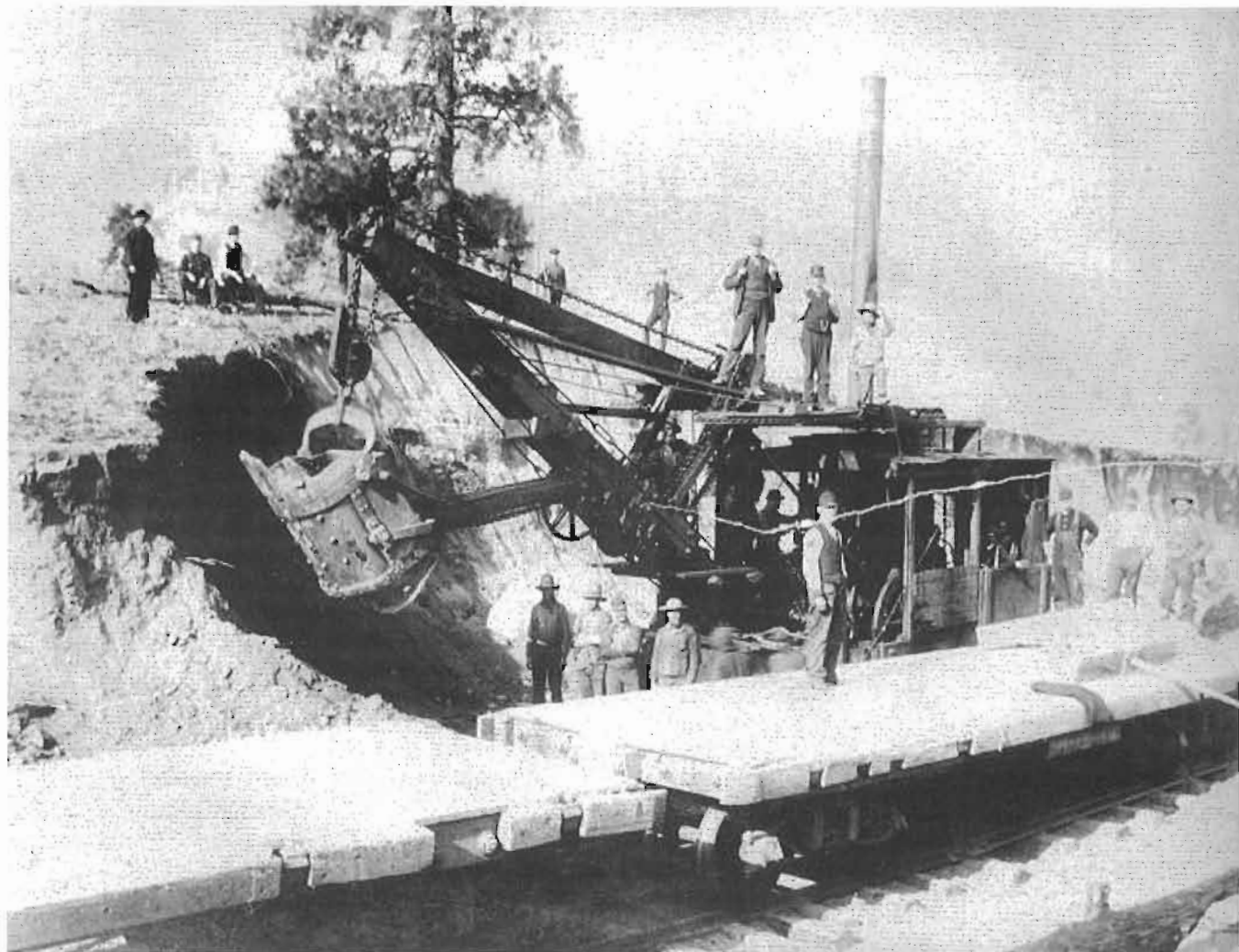
The suspicion deepened as Tupper balked when challenged to supply more details about the contract, and the qualifications of Fleming's successor, Alexander McNab. McNab had been hired as a surveyor in the Public Works department, after having left a position on the Grand Trunk Railway, and a temporary position on the Caribbean island of Grenada.

That he was not well-known in the province, despite his claim to having deep-rooted ties to Nova Scotia, led to comparisons between McNab and James Laurie, the American-based engineer who had summarily replaced the Nova Scotia Railway's first chief engineer, James Richardson Forman of Halifax in 1858.

The *Eastern Chronicle* of May 1, 1866 offered comment similar to Adams':

"It is said, and has been publicly declared through the press, that Messrs. Schreiber and Stewart, the former Division engineer, and the latter, Inspector of Masonry on the Railway, are contractors under Mr. Fleming. If this is a fact we cannot see how they can be retained in the service of the Government, and in government pay. The positions are utterly incompatible, and destructive of every security which the province has for the due performance of the work."

The *Chronicle* had already reported that a culvert on Section 8 had been washed out, and on inspection the failure had been found to be due to faulty masonry, which Fleming was supposed to have inspected and approved. Such



*The second of Onderdonk's steam shovels, of the same era. These machines were similar to those used in 1865-67 by Fleming on the Pictou Branch of the Nova Scotia Railway. BCA Photograph No. 75146. BCA Call Number: I-30852. Photo in Onderdonk Album, #5, 18. (BCA Accession No. 98401-006)*

was the intensity of the scrutiny under which Fleming was working.

Indeed, in its May 14, 1866 edition, the *Eastern Chronicle's* editor, Hugh Simon Holmes, asked Premier Tupper to conduct a commission "of competent and independent people" to investigate Fleming's work. Fleming himself had made the offer in a letter to the Halifax *British Colonist*, a newspaper that openly supported Tupper's administration. No action was taken, which perhaps further deepened the suspicions of Pictou County residents.

In order to accelerate the pace of the work, Fleming had hired two steam shovels, a recent piece of technology, to assist in the excavation of the cutting at Lansdowne, (then known as Battery Hill or New Lairg) on the downward slope of the line's highest point at Gordon Summit, on the border of Colchester and Pictou counties. The area became known as Lansdowne in 1884 by Act of the Provincial Legislature, probably in honor of the then Governor General of Canada, the Marquis of Lansdowne.

The site is on what is now the Cape Breton & Central Nova Scotia Railway's line, immediately to the east of Highway 289, south of Westville. It is on Milepost 26 of the line, almost exactly half way along the line. This was the same location of the grand opening of the line (the second ritual held, for Fleming staged a "Golden Spike" occasion in New Glasgow on September 29 1866 to generate some public confidence in his scheme.)

One reason for the delay in the work (another widely-accepted fact) was the forbidding weather of the period, both in the winter, when construction was often rendered impossible, and summer, when rainfall added to the misery. Fleming alludes to this situation in his work *Opening of the Pictou Railway* (A. Grant, Halifax 1867), and provides the best clue as to the most likely period of the events surrounding the Lansdowne legend:

"The summer of 1866 was unparalleled in this Province for rain, as every farmer knows to his cost. This is a most important consideration; the condition of the weather is beyond human control, and the writer, from the first, fully

understood how very much depended on it. In his report dated October 30<sup>th</sup>, 1865, he alluded to it, and submitted that "moderate good fortune with respect to weather" would be needed to enable him to accomplish the object desired."

Railway Commissioner Avard Longley left no one in doubt as to Fleming's schedule, when he issued his report in October of 1865, prior to Fleming taking up the project as a private contractor:

"The progress made with the works on the "Pictou Extension" has been less rapid than was anticipated when the undertaking was begun, owing to embarrassments resulting from the low rate of contract prices for work to be performed, and it is not improbable that the most of the contracts will ultimately be given up; nevertheless, it is the intention of the Government to have that portion of the line between Fisher's Grant and the "Albion Mines," opened for traffic by the month of September ensuing, and another section to West River by the end of 1866, opening the whole to Truro by the month of May, 1867.

This will tax to the utmost the energies of all concerned; but impressed as the Government is with the importance of opening the line at the earliest possible moment, *no pains will be spared in trying to meet every reasonable desire and expectation connected therewith.* I am sorry to say that Contract No. 7 has already been given up, and the work thereon is now being carried on by days' works, under the immediate supervision of the Chief Engineer. The same course will probably be pursued with other sections which may be given up, or taken out of the hands of the Contractors; and it is hoped thus to avoid any serious delays in the prosecution of the work. The Chief Engineer expresses himself confident in the belief that the work can still be completed as a cost within the limits of his first estimate; and as the utmost confidence is reposed in his ability and skill there is good reason to hope that the result will vindicate the correctness of his judgment." [Italics added for emphasis.]

In order to meet this challenge, Fleming had his navvies working under tarpaulin shelters even in the most inclement weather. This is also accepted as fact, and acknowledged by Fleming in the publication quoted above, which is less a celebration of the opening of the line, and more a defence of his undertaking the work. The book is composed largely of letters of commendation from other engineers, and makes no mention of any tragedy.

McNab, for his part, made reference to the difficulties encountered in Lansdowne:

"The three heavy cuttings on sections 5 and 6, excavated by the steam shovels, have been taken out to a largely increased width, which will obviate the great inconvenience invariably attending all newly constructed lines of railway, by the track becoming frequently covered with slurry from the slopes."

These conditions obliged Fleming to make changes to his original specifications:

"A slight alteration in the original location of the railway has been made New Lairig [sic], but to such an extent as to render it of no consequence whatever either as regards the safety of the road or character of the alignment at that point. Prior to the contract being assumed by Mr. Fleming, a

certain portion of the embankment had been formed, but as the cutting from which the material had been obtained proved so exceedingly hard as clearly to show that the excavation could not possibly be completed in proper season, the centre line was thrown a few feet to the north, where, although but little difference exists in the depth of cutting, the soil is not of so hard a nature.

This alteration entailed an increase in the quantity originally required for the embankment, as it became necessary to widen it at the east end to admit of the original curvature; and taking into account the great height of the bank at this place (about 70 feet) it will readily be seen that the increase in width of a few feet materially enhances the cost of the work."

McNab's report represents the only official acknowledgment of any problems at Lansdowne.

Collapses - or slips - along cuttings and embankments were not unusual along the line of the Nova Scotia Railway. Major William Robinson, who had conducted the survey for the line when it was intended to be an intercolonial railway in 1848, noted it was a common feature of Nova Scotia soil when it became waterlogged.

In his report to Longley October 31, 1866, ten years after the line had been built, road inspector William Marshall was still pointing to the nuisance caused by these conditions:

"I regret that a heavy slip again occurred in the McBean cutting on the Windsor branch, which has greatly increased the cost of upholding. This cutting is on sidelong ground, and collects and retains the water during frost from the rising ground above, and therefore ought to be provided with a proper surface drain twenty or thirty feet from the top of the slope, as a proper means of carrying away all surface water."

The Lansdowne story claims these factors combined with tragic consequences, when the excavations became saturated with rainfall, and the surrounding overburden slipped into the cutting, burying the navvies under tons of sodden soil.

Had this occurred, one might expect the local press to react with suitable righteous indignation, and a scandal to erupt sufficient to require political action. But there is nothing recorded in either of the county newspapers to suggest any such calamity occurred.

There is nothing in the index of the records of the corner's inquests, held by the Nova Scotia Archives and Records management (NSARMS) to suggest any catastrophe took place. Indeed, the index from May of 1865 to July of 1867 indicate only five coroner's inquests were held in the county in that time, and four of those occurred in areas passed by the railway: West River, Fishpools (now Riverton), Fisher's Grant and Albion Mines. If these deaths were associated with railway construction, they might be considered a reasonable fatality ratio for so large a project.

Similarly, there is nothing in the graveyards at Lansdowne Station or nearby Lorne to suggest there were any sudden deaths of men in such numbers to verify the legend. The Ritchie records of county graveyards in the collection of the Pictou County Genealogical Society, at the Hector Centre in Pictou hold no information that tends to validate the story.

Robert Matheson, whose family has ties to the New Lairg area dating back to the construction of the railway, noted members of his family had never spoken of any incident. Matheson's great grandfather was a stonemason on the Lansdowne section of the line. Matheson's father, born in 1900, was custodian of the New Lairg cemetery after 1979 (he died in 1993) and also never spoke of any catastrophe.

There is sufficient evidence to suggest the story has no legitimacy, and in all likelihood probably never happened, but urban legends are difficult to dispel. Unlike most urban legends, however, the Lansdowne story is enhanced by suggestions the tragedy was covered up.

The claim has been made that Fleming, anxious and determined to avoid public outcry, had the bodies quickly buried, perhaps in a mass grave at some conveniently secret location. This aspect of the legend certainly adds an air of excitement and romance to a remote section of railway that appears to lack any attractive qualities. Even the most ardent railway fan is sometimes guilty of overlooking the spectacular scenery of the area, now available only to passengers on the weekly Bras D'or excursion train to Sydney, Cape Breton.

Another version of the story claims that Fleming chose to use a fill at Lansdowne, rather than a trestle, in order to bury the bodies. This probably stems from the notion that an embankment was cheaper than a bridge, as popular historians like James Cameron (*Pictou County's History*, New Glasgow 1972) have claimed:

"The steam shovels made easy work of the long and high fill between Glengarry and Lorne, and but for them an expensive iron bridge would have had to be erected."

Fleming's own document, however, contains a letter from T. Vernon Smith, former chief engineer of the Barcelona and San Juan Railway of Catalonia (Spain) questioning the use of fill, noting that a bridge would have been far cheaper:

"The large ten and twelve feet arch culverts at New Lairg and elsewhere are beautiful specimens of work, that will never be fairly appreciated. Large, bold, iron-girder bridges would have been much more attractive as works of art, would have commanded more attention, and challenged more observation, and their cost would have been even less than the works, unpretending and ornamental as they are, which now permanently span these difficult and formidable gorges."

He got agreement in this from George Lowe Reid, chief engineer of the Great Western Railway of Canada:

"I observed several instances in which you have, at a largely increased cost, built a solid embankment and



*The Cape Breton & Central Nova Scotia Railway's track at Lansdowne, crosses a brook on an embankment more than 70 feet high. It is here that the accident which may have killed as many as 30 railroad labourers is believed to have occurred, in heavy rains. (Jay Underwood photo)*

culvert, where, by a slight change of location and grade, you might have greatly reduced the amount of excavation, and have crossed the ravine by a series of spans, which would have not only saved you a large sum of money, but would have produced a very pleasing structure which an unprofessional man might suppose to be both more costly and more durable than a solid embankment with its accompanying culvert. Few persons besides the Engineer and the contractor know how much costly masonry is buried out of sight underneath one of those heavy embankments to which I refer, and fewer still know how much care and skill are required in their construction, and how much is saved by them in future years, in the general maintenance and repairs of the road."

It is fair to assume then, that the long-term integrity of the line was foremost in Fleming's mind, rather than the interment of some incriminating corpses.

Clifford Crockett, now in his 80's, and a former custodian of the Marshdale cemetery has also heard different accounts of the legend all his life, but adds an interesting element with a version that claims the workers were Chinese.

With no relatives to grieve for them locally, their surreptitious burial was made possible without undue public scrutiny. This aspect appears to be almost certainly untrue, for Chinese labour was not used on any Canadian railway until the 1890s when construction began on the Canadian Pacific Railway.

There is a strong probability that the reference to Chinese workers is a local adaptation of western Canadian history, which holds there is a dead Chinese labourer for every mile of CPR track in the Fraser Canyon section of British Columbia. The Pictou branch is about 50 miles long and the thirty dead workers nearly complement the CPR's fatality ratio.

The are, however, aspects of this version of the legend that make it impossible to dismiss and -if true - makes the event even more historically significant, in that it

could indicate Chinese labour was used well before the CPR was built.

First, the unmarked nature of the grave would be consistent with the burial of "heathen" bodies by Christian folk with no knowledge of what a Chinese funeral might entail.

Secondly, as will be seen later, the rate paid to Chinese labour would have been markedly less than that offered to local men, making Fleming's saving in construction costs possible. This kind of cost saving was realized by Andrew Onderdonk as he undertook the construction of the CPR in British Columbia (<http://collections.ic.gc.ca/generations/emigrants/railway.html>):

"Onderdonk, who had most of the contracts to build sections of the railway line in British Columbia, could not get enough white workers. The whites he did hire disappointed him with their performance - most had never handled a spade or pick before. He decided to use Chinese labourers, and reduced his labour cost by about \$4 million. Without Chinese labour he would have gone bankrupt because it was the Chinese who linked the country from coast to coast. Thousands of labourers were hired at less than half the wages paid to whites. They worked for a \$1/day."

Also, the number of deaths involved, as many as 30, corresponds to the number of men usually employed in Chinese labour gangs (at least within the framework of the CPR experience.)

Indeed, Dr. David C.Y. Lai, of the University of Victoria, Canada's best known authority on Chinese Canadian history noted:

"Even the 1881 Canada Census did not list any Chinese in Nova Scotia. If there were Chinese in Nova Scotia, they might have come from Cuba and Latin America (they were the earlier group from Fujian Province to North and South America,) or they might have come from Liverpool, England."

The Liverpool connection adds some credibility to the Crockett version of the legend, since there was a regular steamer trade between Halifax and Liverpool at the time, and the Nova Scotia Railway's agent in the British port city was a relative of Jonathan McCully, the influential member of the provincial Executive Council.

It appears more likely, however, that almost all of the labour for the Pictou Branch was provided by men from the eastern counties of Nova Scotia, or Irish immigrants, the same combination used on the Nova Scotia Railway when construction began in 1854. Given the systemic racism of the time, it is difficult to imagine the local press would not have reacted sharply to the employment of Chinese labour over "white" men.

Immigrants were targeted to work on the line, as the report by the province's agents in London (Henry Boggs), Liverpool (J.R. DeWolfe) and Glasgow (Alexander Campbell) noted in their report to the Legislature in 1866. The three quoted from a pamphlet issued in Great Britain noting:

"Ninety-three miles of railway are completed, and in operation.

Fifty miles are in the process of construction; and over One hundred and fifty miles additional are now under contract. These works are creating an excessive demand for labor, skilled and unskilled."

The wages were particularly attractive - perhaps enough to buy the silence of workers who might otherwise feel compelled to make intolerable or unsafe conditions on the line public:

"Laborers are paid *in specie*, at the rate of 4 s. stg. a day; masons, 8s. a day and the other mechanics in proportion. Boarding may be had at from 8 s. to 10 s. stg., per week."

While the legend is difficult to prove or disprove, Fleming cannot be held culpable for any deaths that might have occurred, for he was rarely involved in the physical execution of the work along the line.

Indeed, even as the construction of the Pictou Branch got underway, Fleming was in the wilds of northern New Brunswick beginning the first survey of fifteen proposed lines for the Intercolonial to take. Collingwood Schreiber, in the meantime (1864), had joined the Nova Scotia Railway as division engineer of the Pictou Branch, and was on site until the completion of the line.

This is confirmed in J.M. & Edward Trout's *The Railways of Canada* (1871), where it is noted:

"The Pictou extension was surveyed by Mr. Sandford Fleming, C.E., and estimated to cost, including rolling stock, \$2,314,500. Some of the original contractors abandoned their contracts, and work proceeding very slowly, the Government took the work out of their hands, and re-let the whole to Mr. Fleming for the sum of \$2,116,500. The road was satisfactorily completed within the time specified, under the superintendence of another engineer."

This "other engineer" was the unheralded Schreiber. G.R. Stevens devotes a great deal of attention to the Pictou branch and Fleming's supposed triumph, but completely neglects to include Schreiber's participation:

"Fleming had taken on this work as a sort of spare-time occupation but when it was discovered that existing legislation necessitated a contract the Chief Engineer resigned and on January 10<sup>th</sup> 1866 undertook to build the Pictou branch for \$2,16,500, inclusive of the work already done and payments made. This was about eight per cent below the aggregate of the original contracts...."

Stevens provides another reference point for any involvement Fleming may have had with a tragedy at Lansdowne, and emphasizes the measures he took to ensure his deadline was met:

"...Fleming paid off unsatisfactory contractors and took over their work, but where he found work being done well he left it in private hands and in some instances placed fresh contracts. He erected comfortable quarters for his workers and roofed over bridge sites, approaches to tunnels and cuts so that construction might continue throughout the winter. He strung telegraph wire along the right-of-way to keep a check on the daily tasks. He procured two steam excavators which did the work of many men and he opened quarries instead of relying upon casual rock for his masonry. He doubled his force of masons and stone-cutters during the winter, when ordinarily they were unemployed, thus obtaining them at cheaper wages...."

By the end of 1866 twenty-one miles of line, from Truro to West River, were open for traffic.

“West River Station is at milepost 20.5 on the line, on the opposite side of Gordon Summit to Lansdowne/New Lairg. Despite this supposed triumph against the odds, there is little in Rev. George Patterson’s 1877 *A History of Pictou County* to celebrate the construction of the Pictou branch, beyond this salutary paragraph:

“In the year 1867, just one hundred years after the arrival of the first settlers, the railroad from Halifax to Pictou was completed. It had been for some time open to

Truro, and this had somewhat changed the trade, especially of the rural districts of the county, large quantities of agricultural produce being sent over land to Halifax, thus making improved markets for our farmers. The effect of the completion of it, by the increased facilities which it affords for communication with the rest of the continent, it is unnecessary to point out.”

Although Patterson’s focus is on the early history of the county, if the Lansdowne tragedy had occurred, it surely could not have escaped the notice of one so concerned with the fate of a man’s soul. Patterson claims to have spared no effort to deliver an accurate history:

“He has ransacked the County and Provincial records, and teased all officials with his enquiries; he has plodded his weary way through newspaper files, and works of Colonial history; he has interrogated Micmacs, and, as the Scotch would say, “expiscated” every old man and woman he has met with in the county for years; he has also conducted a large correspondence, and visited various sections of the country in search of facts. To arrive at the exact truth, he has labored conscientiously, as if he were writing the history of Europe, and though he can scarcely hope, that his work will be found free from all errors, yet he believes that these will not be material.”

Local mining disasters are described in some detail, for example, yet curiously Patterson acknowledges some aspects of the county’s history have been omitted, and have a dark side:

“It is too well known that the history of the county has been disfigured by painful controversies. These could scarcely be ignored in a history like this, but the treatment of them, it will readily be seen, must be a work of difficulty and exceeding delicacy. The course which he has adopted, has been to pass over all contentions of a personal character, but where there seemed questions of importance at issue, to point them out clearly and candidly. And though he could



*Lloyd MacDonald (right) custodian of the Marshdale cemetery shows the unmarked gravesite to researcher Peter Underwood. The 30x70 foot lot shows some signs of interment. (Jay Underwood photo)*

not help, to some extent, viewing these from his own standpoint, yet it has been his aim to look at them from all sides, to endeavour to arrive at the exact truth regarding them, and to judge charitably, where his convictions would lead him to condemn.”

It is clear from Patterson’s “standpoint” that there was no incident at Lansdowne worthy of note: But one wonders if the Presbyterian minister was reluctant to implicate Fleming, also a devout Presbyterian (he authored works on the organization of the church) in the deaths of navvies who might have been Irish Catholic immigrants?

Coincidentally, Patterson and Fleming shared the same publisher, Dawson Brothers of Montreal, and were published within a year of each other; Fleming’s history of the Intercolonial Railway being released in 1876.

It is possible the content of the legend is rooted in the traditional mistrust Pictou County residents have harbored against the “establishment” in Halifax. This attitude became quite apparent in recent times in the aftermath of the Westray coal mine disaster of 1992, when government collusion (albeit a government headed by a Pictou County member, Donald Cameron) with the mining company was widely claimed to have been at the root of the explosion that killed 26 miners.

If the legend is to be proved or disproved, it may be necessary for the Marshdale cemetery corporation to decide whether or not to excavate the plot, but even the presence of a few bodies would not necessarily corroborate the legend’s claim; deaths on such projects were commonplace.

The exhumation would do more than satisfy morbid curiosity. It might help determine if Chinese labor was used on a Canadian railway more than 20 years before the CPR got under way, and it could cast the reputations of both Fleming and Schreiber in a new light.

Perhaps sometimes it is better to let the ghosts lie undisturbed.



# Alexander Luders Light: The Forgotten Man

by Jay Underwood

In his epic history of Canadian National Railways (Sixty Years of Trial and Error, Vol. 1, Chapter 5), George R. Stevens describes the original plan to develop the Intercolonial Railway, and the choice of Sandford Fleming as chief engineer in all too brief terms:

“The plan for a joint survey involved the appointment of a survey commission of three engineers, one nominated by the Province of Canada, one by the two Maritime Provinces and one by the Imperial Government. The Canadians chose Sandford Fleming, who had come to Canada as Chief engineer of the Northern Railway. It was manifestly impossible for the Maritimes to find a representative of the calibre of Fleming; so he was asked to represent Nova Scotia and New Brunswick as well. Whereupon, the British government, with a pat on the back for everyone, also chose Fleming as its representative.”

There are some obvious errors in this statement - the first being that Fleming did not come to Canada as a chief engineer - but over the years conventional histories have allowed the final facile statement to pass unchallenged, to the point that it has become an accepted fact, when indeed there were numerous engineers who could have represented New Brunswick and Nova Scotia, and a chain of circumstances that challenge the legitimacy of Fleming's claim to fame.

In *The Myth of Sandford Fleming* (Canadian Rail #483, July-August 2001) it was noted that Collingwood Schreiber (by 1864 he was the divisional engineer on the Pictou Branch of the Nova Scotia Railway, albeit as a long-term associate of Fleming); George Wightman (who had surveyed railways in Nova Scotia and New Brunswick, and had participated in the original survey for the Intercolonial conducted by Major William Robinson); and Alexander Luders Light, chief engineer of the European & North American Railway in New Brunswick, were equally deserving of consideration.



Alexander Luders Light, a photo ca. 1880 in his capacity as government engineer for the province of Quebec. (National Library of Canada)

The name of James Richardson Forman might also have been added, had he not been forced out of his position as chief engineer of the Nova Scotia Railway in 1858 by the venality of some of Nova Scotia's leading politicians. Forman went on to engineer prominent railway lines in Scotland.

Of these men, none deserves more consideration than Alexander Luders Light, and it appears that in fact Light was the imperial government's first choice, not Fleming. Conventional history has forgotten Light, his connection to the Intercolonial, and the twists of fate that changed the course of Canadian history.

According to his biography in *The Canadian Biographical Dictionary* (H.C. Cooper & Co. 1881), Light was born in Durham, England, April 17 1822. His father was Colonel Alexander Whalley Light, a career soldier and colleague of notable generals and members of the royal family, a factor that would play in favour of the engineer in later years.

After being pensioned out of the army with a distinguished record of service under the likes of the Duke of York and the Duke of Wellington, Col. Light brought his family to Canada in 1831. He was the first of a number of retired British officers to settle in Ontario's Oxford County, establishing the family home on Dundas Street between Beachville and Woodstock. Young Alexander became a student at the Royal Grammar School in Kingston, where one of his schoolmates was the future Sir John A. Macdonald.

Showing proficiency in mathematics and mechanics, Light was articled to "an English Civil Engineer of ability," and by 1842 had become assistant engineer in the Board of Works of Canada, under H.H. Kilally and Samuel Keefer.

By 1846 Light had advanced to the staff of the Great Western Railway of Canada, as Allan MacNab's line began its crawl from the Niagara River to the Detroit. His first position as chief engineer came in 1851, on the St. Andrews & Quebec

(later the New Brunswick & Canada Railway), taking on the difficult task of restarting works that had lain fallow for almost five years because of the company's financing problems.

The *Biographical Dictionary* notes that for the next ten years Light "almost uninterruptedly filled important positions as Chief Engineer of Government Railways in the Provinces of New Brunswick and Nova Scotia."

This reference is inaccurate, since Light does not appear to have been so involved with Nova Scotia's government-owned railway during that period, the chief engineer's job going successively from James R. Forman to James Laurie, to Sandford Flemming then Alexander MacNab. He was, according to Christopher Andreae (*Canadian Dictionary of Biography*, 1990) retained by Joe Howe in 1860 to inspect and report upon the condition of Nova Scotia's railway. This too is inaccurate, since Light was hired in a consultative role only, to report (February 1861) on the extension of the railway from its terminus at Richmond, deeper into the city of Halifax to Queen's Wharf, and he was not the chief engineer.

Additionally, Light worked briefly on the New York Central Railroad, even then one of the great systems in the U.S., and such experience undoubtedly made him more qualified than most to claim the Intercolonial's top engineering position.

His name was made, however, in the construction of the European and North American Railway between Saint John and Shediac, a project that brought him close to the British engineer James Brunlees. In both New Brunswick railway projects, Light became familiar with the intentions of the Intercolonial scheme, both being private attempts to accomplish the same goal. Light came to the E&NA after the New Brunswick government was obliged to take over the work from the British firm of Peto, Jackson, Brassey and Betts, and his talent brought him to the attention of the lieutenant-governors of Nova Scotia and New Brunswick as they wrestled with the grand proposal of the Intercolonial.

A memorandum prepared in 1867, contained in the University of New Brunswick, Archives and Special Collections Department, Harriet Irving Library, shows Light's work bridged the surveys made first by Robinson in 1848, and later by Fleming.



*Sandford Fleming. His appointment as engineer for the Intercolonial was not the coronation popular histories have suggested. (Canadian Illustrated News.)*

"After the completion of the works in New Brunswick, it was suggested to Mr. Light by the Hon. A. Gordon, Lt.-Governor of that Colony, and Lord Mulgrave, Lt.-Governor of Nova Scotia, that he should examine the three proposed lines of the Intercolonial Railway, in view of his becoming ultimately the Engineer of the undertaking. To accomplish this he devoted a whole season, and employed two Engineers and a staff of men to assist in the survey, the cost of which was defrayed from his own purse."

This document, which has been overlooked in the conventional histories of the railway, places Fleming's exalted position in a new light. The memorandum was written to the new federal government of Canada on October 25, 1867 by Light, to make his case for being named chief engineer of the Intercolonial.

Light's memorandum notes:

"On the completion of the survey he accompanied the Delegation to England in the autumn of 1861, and drew up and published a report, with a map of the proposed lines; which was largely circulated both in the Colonies and the United Kingdom, and which tended very materially, at the time and subsequently, to remove the objections of the Imperial Government, and to pave the way to their consenting to the Imperial Guarantee."

Light further distinguished his career at the onset of the "Trent affair" when tension between Great Britain and the United States increased over the U.S. seizure of the British mail ship, and subsequent removal of two Confederate agents on the high seas. By virtue of his father's military connections, Light was named the army's engineer in charge of opening the rough road between Restigouche and Metis, by which the British might reinforce the garrison at Quebec in the event of a U.S. attack on central Canada.

In the collection of the Duke of Newcastle's letters (University of Nottingham) the duke informed Viscount Charles Monck, Governor General of Canada (Ne C 11205, December 21, 1861) of his concern about the danger of the frontier road from Saint John to the St Lawrence, and advises him that the imperial government had decided to open the road "which terminates at Metis." Newcastle states that the War Office "is sending out Mr. Light to survey the area."

The war office at that time was headed by Sir George Cornwall Lewis, who had previously been the Home Secretary (1859-1861). A journalist by calling (he had been editor of the *Edinburgh Review*) there is no established connection between him and Light. The appointment was made on the advice of Gordon, since Light was already in the provincial employ as chief engineer of the European & North American Railway.

Certainly the British Chancellor of the Exchequer, William Gladstone knew who Light was. In 1850, Gladstone had received a copy of an 84-page book entitled *A plan for the systematic colonization of Canada, and all other British colonies, by an officer of rank, nearly twenty years resident in Canada*. The author was Col. Alexander Whalley Light, and the bookplate bore the inscription:

“To the Right Honble., W.E. Gladstone, M.P., with the author’s profound respect. My name to be kept secret for obvious reasons.”

The book, like many other works on the same topic of the era, focused upon the use of railways to spread the influence of the empire by the export of the poor masses of the British Isles. Why Light felt he should remain anonymous is not so obvious.

The conventional histories of the railway suggest Fleming won the post because of an association made with the fifth Duke of Newcastle under Lyne - Henry Pelham Clinton - in 1860, when the Prince of Wales toured British North America and rode upon the Northern Railway, of which Fleming was chief engineer at the time. Light’s memorandum indicates he was equally well known to the Duke:

“When this service was dropt [sic] (on the avoidance of war) Mr. Light returned to England with another delegation in the autumn of 1862, and had several interviews with the late Duke of Newcastle, and afforded his Grace such information as induced him to offer to Mr. Light the appointment of Imperial Engineer in accordance with the terms of the Treasury Minute which had just then been passed.”

Clearly, by late 1862, Light believed he was chosen to be the guardian of the Imperial interest in the Intercolonial, but the machinations of Canadian politicians then came into play and ultimately foiled his opportunity. The memorandum continues:

“In consequence of the non-compliance of the Canadian Delegates, the work then fell into abeyance; but so confident was the Duke that its suspension was only temporary, that he proposed to Mr. Light to remain in England in the hope that a brief period would bring the assent of the Canadian Parliament. Mr. Light remained two months, though he was pressed at the time to accept an appointment in Brazil worth £3,000 a year. This deal was therefore an actual



*The ambitious Lieutenant Governor of New Brunswick, Arthur Hamilton Gordon. (Provincial Archives of New Brunswick)*

loss to Mr. Light of £500 – besides which he was out of pocket about £1,000 by the previous cost of the survey, maps and reports and journeys to England.”

The pressure to go to Brazil was being applied by Brunlees, who had secured the contract to build the Sao Paulo railway between the Brazilian coffee-producing city and its South Atlantic port of Santos. The railway would become one of the most important in the State of São Paulo, and had to overcome the obstacle of the Serra do Mar mountains. In a distance of seven miles the railway rose to a height of 2,625 ft., using a cable railway. The £2,000,000 project was under the control of 26-year-old Daniel Makinson Fox, one of Brunlees’ brilliant students. It was a formidable task, as a 1935 article notes:

“When the railway builders appeared upon the scene they found themselves faced by conditions which had seldom been previously equalled in such operations. Although the first dozen or so

miles out of Santos run through practically level country for a greater part of the way, the land is marshy, and before it reaches the foot of the cliff the line has to cross an arm of the sea and two formidable rivers, both of which are subject to heavy and sudden fluctuations in level.

For the first eight miles a low embankment had to be raised to receive the metals laid on the 5 ft. 3 in. gauge, the course of the line paralleling the Government road laid across the marshes. A 500-ft. bridge takes the railway across the arm of the sea which separates from the mainland the island on which stands time port of Santos. The Cubatão River is crossed by four 75-ft. spans, and the Rio Mugy by three 66-ft. spans.”

This heavy bridging would stand Light in good stead when he took up his position as a divisional engineer on the Intercolonial, responsible for the massive bridges across the Miramichi river in New Brunswick.

In Brunlees, Light had found a competent and lifelong ally. Born in Kelso in 1816, he built the Bolton & Preston Railway and its tunnel under the Mersey river, and a rack railway up Mont Cenis in the Swiss Alps. The *Gazeteer for Scotland* notes:

“He was also responsible for the docks at Avonmouth and Whitehaven, together with piers at Southport (1860) and Southend (1890). Brunlees used novel and economical techniques in the construction of the former, which became the first iron leisure pier built in Britain. It was 1097m (3600 feet) long when opened, but extended to 1335m (4380 feet) in 1868.

Brunlees was also the consulting engineer with the original Channel Tunnel Company (1872-1886), which planned but failed to build the first link between and continental Europe.”

The *Gazetteer* fails to note that Brunlees had also designed a novel railway to transport fully-laden ships across the strip of land that later became the site of the Suez Canal. That idea sparked a chord in the mind of one of Light's pupils on the European & North American Railway, Henry Ketchum, builder of Nova Scotia's ill-fated Chignecto Ship Railway.

In the meantime, Light's employment in Brazil cost him dearly, as his memorandum notes:

"The Duke only consented to Mr. Light then accepting to proceed to Brazil on the condition of a clause being inserted in his agreement that he should be at liberty to return to make surveys for the Intercolonial Railway, when required: The surveys were ultimately made; and Mr. Light could not but feel somewhat aggrieved that he was *not* sent for."

Instead the job was presented to Fleming. Henry Fiennes Pelham Clinton, fifth Duke of Newcastle and Earl of Lincoln was an enigmatic man. He held many important political positions, and was confidante and ally to many more, including William Gladstone and members of the Royal family.

His personal life was very unhappy. His marriage to Lady Susan Hamilton (1814-1889) was fraught with difficulties and was ultimately dissolved in 1850 after she abandoned her family in favour of a life in Italy. His relationship with his father, the fourth duke, was strained; his father actively campaigned against him in one election. Similarly, he had strained relationships with most of his children.

His third son, Lord Arthur Pelham-Clinton was a homosexual, and the duke's correspondence with his friend Gladstone often included complaints about Arthur's behaviour. Born in London in 1840, and educated at Eton, Arthur entered the Royal Navy in 1854, and was commissioned as a lieutenant in 1861. He served with distinction in Capt. Peel's naval brigade in India, receiving two medals, and paving the way for a promising political career. A Liberal, he was first elected MP for Newark in July 1865, but "retired" in 1868 shortly before a scandal in which it was revealed he was the lover of the noted transvestite Ernest Boulton, who went by the names 'Mrs. Stella Graham' and 'Lady Arthur Clinton'.

Boulton, and one William Frederick Park, were arrested on leaving the Strand Theatre on April 28 1870, dressed as women. The resulting 1871 trial was a sensation, and revealed Lord Arthur was not the only man interested in 'Stella.' The affair ended with a not guilty verdict on the charge of conspiracy to commit the felony of sodomy. Lord Arthur died in 1870, the duke was spared any embarrassment; he died in 1864.



*A young Edward Pelham Clinton, Fifth Duke of Newcastle. (University of Nottingham.)*

One of his daughters caused similar upset. Lady Susan Clinton married Lord Adolphus Vane - contrary to her father's wishes (the duke believed "Dolly" Vane, the spoilt youngest son of the Marquess of Londonderry, was mentally unstable.) After "Dolly" Vane's death, Lady Susan became one of the Prince of Wales's many mistresses, and bore the future King of England an illegitimate son.

The duke did not live to witness his second son's distinguished career. Lord Edward Pelham Clinton was a soldier until he retired in 1880, to become Groom-in-Waiting to Queen Victoria (1881-94); Master of Queen Victoria's Household (1894-1901); and Groom-in-Waiting to King Edward VII (1901-7), but perhaps the behaviour of his other children explains why the duke took both delight and solace in the company of men of vision and action.

Writing in *The Great Houses of Nottinghamshire and the County Families*, (Nottingham, 1881) Leonard Jacks quotes a Miss Martineau, who

noted in 1864, shortly after the duke's death:

"No statesman of our time has won a more universal respect and regard, and few Ministers of any period could be more missed and mourned than he will be by good citizens of all parties and ways of thinking ... Those who were nearest to him were subject to frequent surprises from his simplicity, his unconcealable, conscientious, and abiding sense of fellowship with all sincere people, whoever they may be. As a nobleman of aristocratic England, he was in this way a great blessing, and a singularly useful example."

From this we might gather that the duke's word was his bond, and thus it must have taken some great persuasion to oblige him to rescind the offer made to Light.

Fleming's opportunity to involve himself in the Intercolonial project came in 1863 as he was in London presenting the memorial from the people of the Red River settlement asking for a road or railway to link them to Upper Canada. As John Charles Dent noted in *The Canadian Portrait Gallery* (J.B. Montague, Toronto, 1881):

"In his professional capacity he visited the Red River country, to examine as to the feasibility of a railway connecting that region with Canada. At the request of the inhabitants there he proceeded to England on their behalf in 1863, as bearer of a memorial from them to the Imperial Government, praying that a line of railway might be constructed which would afford them direct access to Canada, without passing over United States territory. Upon Mr. Fleming's arrival in London he had repeated conferences on the subject with the late Duke of Newcastle, who was then Colonial Secretary."

The Newcastle collection of the University of Nottingham indicates the memorial was presented to the duke between January and March of 1863.

No doubt Fleming took full advantage of the "repeated" opportunities to renew the acquaintance they had made in 1860, and in doing so positioned himself as one of the leading proponents of the railway, even though others had championed the cause long before him.

Light was also in England in 1862, as his application to join the Institution of Civil Engineers in 1863, sponsored by Brunlees, testifies. This membership may only have been a token gesture on Light's part; something to add to his credentials, for it appears from the records of the institution that he never read a paper before its assembly of august engineers, nor was his obituary published in the institution's minutes or proceedings, or published in the journal, *The Engineer*, as was customary.

The letters that passed between the duke and the colonial administrators, in the possession of the University of Nottingham, however, indicate that Lord Newcastle had ruled out Light's participation even as Fleming was presenting the Red River memorial.

The collection of the duke's letters is extensive, but in this particular case, incomplete. The first (Ne C 11184) is an incomplete letter from New Brunswick Lieutenant Governor Arthur Hamilton Gordon (later 1st Baron Stanmore of Great Stanmore) to the duke, July 29, 1863.

Gordon spent a great deal of his time lobbying Newcastle become the first governor of the united lower provinces, and had apparently been a supporter of the proposal made to Light to be the imperial representative on the engineering triumvirate. In the incomplete letter, however, it is clear Newcastle had already explained why Light was no longer a candidate, and Gordon offered some advice to the duke:

"We are going to commence the survey of the Intercolonial line, and as by far the greater part of the country to be surveyed lies in New Brunswick, you will not think it impertinent if I say a few words as to the choice of the Imperial Engineer (Light being now out of the question) – It is very important that he should not be in any way connected with the Grand Trunk or Mr. Watkin, as if he is, he will at once arouse a prejudice against himself, and destroy all confidence in his report. What we want is a really good English engineer, wholly unconnected with North American parties."

This is the first indication that Fleming was not as obvious a choice as Stevens and others would have us believe, but Gordon goes on to indicate that Fleming wasn't even New Brunswick's second choice. In a letter (Ne C 111861/3) dated September 14, 1863, the governor notes:

"Meanwhile I am anxious about the appointment of the Imperial Engineer for the survey of the Intercolonial. Do not without consideration reject my recommendation of Mr. Rendel. He would take it I know if offered."

George Wightwick Rendel (1832-1902) was the second son of the famed engineer James Meadows Rendel, who had died in 1856. The senior Rendel was an acknowledged expert in hydraulics, but had also worked on

transportation projects, like various chain ferries throughout England, and was the London consultant for the East India Railway. Like his father, George Rendel would become a pioneer in the design and construction of wrought iron and steel bridges.

He would also become conversant with Imperial defence issues (which the Intercolonial was in its formative years), serving as a civil Lord of the Admiralty from 1882-1885. The name lives on today in the international consulting firm of High Point Rendel.

The duke did not take Gordon's advice, but his reasons remain unclear. In a letter (Ne C 11227/1-2) dated September 18, 1863, obviously posted as Gordon's reminder about Rendel was on its way to Newcastle's estate at Clumber Park, the duke told Monck:

"Amongst the arrangements respecting the Intercolonial Railway agreed to hen the delegates were over here, one was that Canada should appoint an engineer for the preliminary survey, Nova Scotia and New Brunswick another and I another. I intended to have named Mr. Light but when Canada hesitated about the whole matter he accepted an engagement in Brazil. Now that Canada has suddenly reverted to the survey I am unprepared with any other name than Mr. Fleming whom you have judiciously chosen, for I feel sure that if I were to send a good engineer from England his ideas would be much too extravagant for such a line as ought to be constructed and would probably ruin the project by his notions of expense.

I am, under the circumstances, willing to forgo the appointment of a third surveyor having every confidence that Nova Scotia and New Brunswick will select a good man and having heard so favourably of Mr. Fleming that I should have named him if you had not.

I say therefore do not allow any delay to take place in commencing the surveys for want of the third engineer."

The move did not sit well with Gordon. In a letter (Ne C 11188/1-2) dated October 27, 1863, and at the possible risk of being passed over as the governor of the new province of Acadia (a united Nova Scotia, New Brunswick and Prince Edward Island), Gordon was unequivocal about his opposition:

"For the first time since you have been my master I have now to make a little expostulation with you. If the survey had gone on or does go on do you think it was quite fair to appoint as Imperial Engineer the Engineer nominated on behalf of Canada?

We had looked to the Imperial Engineer for impartiality and had supposed that he would hold the scales between those from Canada and the Lower Provinces, but according to this arrangement the Canadian engineer would have had the survey and the report entirely in his own hands. Just reverse the case and fancy what an outcry there would have been in Canada if you had nominated as Imperial Engineer the one appointed by the Lower Provinces! Yet the cases are precisely parallel.

I can not help thinking that it may have been suggested to you as agreeable to all the provinces. If so I can only say most decidedly that no such proposal was ever

made to any member of this Govt. and that had any such been made it would have been at once rejected.”

It is perhaps unfortunate that the collection of the duke's letters should leave so many gaps in the record, but those gaps raise interesting questions. There is, for example, no record of the duke's specific reason for not appointing Light, as he had promised, despite the fact that Light was in England at the time, and would have been available, as he had promised.

Christopher Andreae claims Light was dismissed from the Brazilian project:

“...apparently for political reasons, in 1863 or 1864, and he returned to England”

Whatever those reasons may have been, they were not sufficient to prevent his acceptance into the Institution of Civil Engineers.

There is also no record of any letter passing from the duke to Light to explain the sudden reversal of the commitment the duke admits to having made (in his letter to Monck), which seems oddly out of character for a politician noted for the strength of his word.

Similarly, the duke is oddly reserved in his appraisal of Fleming, noting to Monck that he was appointing Fleming as the imperial engineer on the basis of what he had heard about him. Yet, the duke had met Fleming personally in 1860 as he accompanied the Prince of Wales on his North American tour, and as recently as January-March of 1863 as he accepted Fleming's presentation of the Red River Memorial.

What could have been said by Fleming to influence the duke? Did he sabotage Light's appointment?

Fleming did not need the Duke of Newcastle's blessing or patronage in order to work on the Intercolonial. Under the agreement between the parties, he had secured enough favour with Monck to win the position as Canada's representative on the three-man committee of engineers. He was the first confirmed candidate, as noted in his 1876 history:

“In pursuance of this arrangement the Government of Canada passed an order in council on the 22<sup>nd</sup> August, 1863, appointing Mr. Sandford Fleming to co-operate with the nominees of the Imperial Government and the Lower Provinces.

This appointment was communicated to the Governments interested, with the request that such action should be taken as would enable Mr. Fleming, with his colleagues to commence the survey without delay. Mr. Fleming was however nominated by Nova Scotia and New Brunswick, and the Duke of Newcastle, then colonial secretary, likewise appointed him on behalf of the Imperial Government.

In making the selection of Mr. Sandford Fleming as the representative of the Imperial Government while he at the same time was acting for the British American Provinces, it was felt that the Duke had rightly appreciated the importance of avoiding the delay and inconvenience invariably attended on divided responsibility.”

Fleming's account, which was almost certainly written for him by his friend Rev. George Munroe Grant, is accompanied by a footnote:



*Viscount Charles Monck, the Governor General of Canada.  
(National Library of Canada).*

“The appointment was made by Despatch dated October 17, 1863, to the Governor General – The Duke says;- “The character of Mr. Sandford Fleming whom, in your despatch No. 81, you mention as having been nominated by the Government of Canada to undertake the preliminary survey of the line of Intercolonial Railway, is so unexceptionable; and the selection of him by the Government of Nova Scotia and New Brunswick is such a further convincing proof of his qualification for the office of Engineer for the line, that I am quite ready to avail myself of his services as the representative of the Imperial Government. Your Lordship will accordingly be pleased to appoint Mr. Fleming at once to the situation. It is agreeable to me to feel that by selecting Mr. Fleming as the combined representative of Her Majesty's Government and of the North American provinces especially interested in this important subject, much delay has been avoided, and that the wishes of your Government for the immediate commencement of the survey have, as far as this appointment is concerned, been complied with.”

What Grant - or Fleming - fails to note is that the words were in fact those of Sir Frederic Rogers, the under secretary of state for the colonies, and not the duke himself. By this point, the duke's health was beginning to fail him, forcing him to issue several assurances to the colonial and imperial leaders that while he was frequently indisposed, he was not incapacitated. (In November of 1863 he told William Gladstone by letter not to be concerned about his health; he was not suffering as much, and his cough had not “increased the oppression of the heart.”)

Rogers' glowing accolade included a proviso:

"It will of course be understood that in waiving their rights to appoint a separate Engineer for effecting the survey, Her Majesty's Government do not abandon the right to satisfy themselves that the line is one which will answer the purposes in which the Imperial Government is interested, and that it can be constructed without application to the Imperial Government for any further guarantee."

The letter, dated October 17, 1863, and the letter containing Governor General Monck's instructions to Fleming (then in Fredericton) dated March 15, 1864, also points to Stevens' error in asserting that the Imperial Government put the seal of approval on Fleming's appointment as the sole engineer. By this time, Nova Scotia and New Brunswick had not reached a decision.

In his letter, Monck clearly tells Fleming:

"You will endeavour to act in a cordial and harmonious spirit with any persons who may be appointed either on the part of the sister colonies, or of the Imperial Government, to co-operate with you."

The question remains, however, why – if time and speedy prosecution of the survey were so essential – did Fleming take the time to survey fifteen lines when Robinson and Light had invested so much effort to narrow the choice to three routes?

And, if co-operation was a key concern, one has to wonder whose convenience was being considered when Fleming spoke deprecatingly of "divided responsibility?" Certainly he had established a precedent for himself in Nova Scotia when he resigned his position as chief engineer of the provincial railway in order to complete the branch from Truro to Pictou landing, demanding a free hand from the government of Charles Tupper.

The documents contained in the appendices of the February-April 1864 *Journal of the House of Assembly of New Brunswick* shows Gordon's own executive council was loathe to join with Nova Scotia in appointing any engineer until legislation had been passed by all the colonies, approving both the cost-sharing formula and the appointment of the board of commissioners. As it turned out, neither province had to make an appointment.

On September 18, 1863, Gordon sent Monck a copy of the council's minute to him, noting New Brunswick's reluctant acquiescence:

"In recommending to your Excellency to appoint, in conjunction with the Government of Nova Scotia, an Engineer, to make the preliminary exploration and surveys of the line of the proposed Railway, previous to the passing of the Railway bills by the Canadian Legislature, we are aware that we are not adhering strictly to the arrangements agreed upon at Quebec by the Representatives of the three Provinces in September last, and subsequently confirmed by Her Majesty's Representative in each, which provided that no survey should be authorised until the necessary Legislation should be had by the several Colonies and joint Commissioners appointed.

As such survey, however, is desired by the Canadian Government, they bearing five-twelfths of the cost, we are induced to advise your Excellency to make the necessary appointments for that purpose, in full faith that no other departure from the compact entered into between the three Provinces will be proposed; and that the construction of the Railway, if found practicable, will be undertaken on the basis of the agreement."

Given that very definite statement, it is surprising Gordon would have agreed to appoint Fleming as the New Brunswick-Nova Scotia engineer, when he had already been given the hats of the Canadian and imperial representative, a further abrogation of the Quebec accord of 1862.

In the meantime Gordon kept up his acrimonious correspondence with Monck over Canada's intransigence on the legitimacy of the funding agreement. The controversy was created by Canadian delegates William Pierce Howland and Louis Victor Sicotte, who returned from their November 1863 meeting with Newcastle (and a side trip to Paris) to declare that Canada considered the survey vital to the determination of whether or not the upper provinces would participate in the construction of the railway. The September 1862 meeting at Quebec had determined that no survey would take place until all four parliaments had passed bills in support of the financing, to be done through a sinking fund toward which Canada would pay a five-twelfths share.

Stevens is sharply critical of Howland and Sicotte, but he ignores the repercussions of their action insofar as it influenced Fleming's position.

Gordon made it clear to Monck that New Brunswick understood that the survey and the funding agreement were not inseparable, and the funding arrangement was not open to re-negotiation after the survey had been completed and the exact cost established.

Nova Scotia's administrator, Major General Hastings Doyle (then serving in lieu of Viscount Normanby) agreed with Gordon, and even Newcastle expressed his concern over Monck's apparent duplicitous statements that the agreement of 1862 was abandoned, yet the arrangement for the appointment of the engineering commission was still in effect.

The argument had simmered for most of 1863, when Gordon - receiving Monck's gloating November 2 memo that Newcastle had agreed to make Fleming the imperial engineer - wrote to his "master:"

"It is with some surprise that I observe in Your Grace's Despatch to Viscount Monck, of which a copy is enclosed by Your Grace, an allusion to the assumed fact that Mr. S. Fleming was appointed to act as Engineer on behalf of the Lower Provinces as no such appointment has been made by them. It is true that the members of the Government of Nova Scotia were not averse to Mr. Fleming's appointment, but it never assented to by the Executive Council of this Province, and such being the case, the appointment was not, I believe, ever formally proposed for the consideration of the Executive Council of Nova Scotia."

Referring to the dispatch written by Fredric Rogers, lieutenant-governor also expressed his concern that Canada had requested Fleming be appointed as the imperial engineer:

"The concluding words of the third paragraph of Your Grace's Despatch to Viscount Monck, may possibly be held to intimate that the appointment of Mr. Fleming as Imperial Engineer had been requested by the Canadian Government. If so, I can only observe that no intimation of the intention to make such a request, or its having been made, was ever conveyed to this Government. In reply to a question whether the subject was mooted during Mr. Tilley's recent visit to Quebec, that gentleman informs me that "such a suggestion was never made in his presence, and if made would have met with his disapproval."

Was Canada conspiring with London to get "their" man in place? It is unlikely. Newcastle was quick to respond and admit that a mistake had been made, a point never admitted by Fleming in his history of the work, or acknowledged by subsequent histories. Writing from Downing Street on December 20, 1863 Newcastle assured Gordon:

"I intimated my readiness to concur in the choice of Mr. Fleming, to execute a preliminary Survey, under the impression that the Provincial Governments had already agreed upon making that selection. In this it appears that I was mistaken, and therefore the nomination must be considered as, for the present, superseded. I can only say that, if the correspondence which is in progress on the subject between the several provincial Governments should result in a resolution to make a Survey, I shall be happy to do my best to facilitate any measure which they may agree upon as calculated to promote a satisfactory settlement of the question of constructing the Railway."

It is unfortunate that the duke did not attempt to determine how, or with whom, this misunderstanding originated; himself, Rogers, Monck or Fleming?

With the argument between Monck and Gordon now extending into 1864, and each side blaming the other for the nearly 12-month delay in starting the survey, the Canadians decided to take matters in hand. Writing to Gordon on February 20, 1864, Monck informed him:

"Referring to the Correspondence which has taken place between the Governments of Canada and that of New Brunswick in reference to the execution of a Survey of the Route of the proposed Inter-Colonial Railway, I have the honor to inform Your Excellency that in order to avoid further delay, the Government of Canada has decided to undertake the Survey on its own responsibility, and at its sole expense."

It is unclear whether Monck expected this news to be met with satisfaction, since it again openly abrogated the terms of the 1862 agreement to which New Brunswick was rigidly adhering, and from which Gordon's executive council had emphatically announced it would not deviate.

Taking an imperious tone, Monck threw the ball back into New Brunswick's court, and indicated Canada considered both lower provinces to be minor players in the events henceforth:



*The Mogy viaducts on the Sao Paulo Railway of Brazil. Light engineered these spans with his student Henry Ketchum.*

"It will be for the Governments of Nova Scotia and New Brunswick to consider whether, if the results of the Survey shall prove useful to the enterprise, they will deem it right to reimburse to Canada their proportion of the cost of the work."

By referring once more to a term of the 1862 agreement, Monck was underlining the bicameral nature of Canada's understanding of the deal. The Governor General closed his dispatch with a final missive:

"Mr. Sandford Fleming, the Engineer appointed to conduct the Survey will be despatched to the seat of his operations as soon as the necessary arrangements can be completed, and I have to request that you will give directions that he may receive any assistance in the discharge of his duties which it may be in the power of your Government to afford him."

Clearly Monck was ignoring the notion that Fleming would be acting under no authority but that of the Government of Canada; his appointment as the imperial engineer had been suspended by Newcastle. His gambit paid off, however, as Gordon appears to have become equally as tired of the bickering. Writing back to Monck on February 29 he noted:

"The spirit which has prompted this determination, I trust, offers a favorable augury for the speedy conclusion of the work so long contemplated, and affords a fresh guarantee that the Government of Canada is sincerely desirous of its accomplishment."

While promising to give Fleming any assistance he might require, Gordon's executive council made it clear they would adopt the stance taken by Newcastle and Rogers when they had named Fleming the imperial engineer in addition to his duties as Canada's representative:

"As the present Government of Canada yet appears to consider a preliminary Survey of the Inter-Colonial Railway essential to secure the passage through the Canadian Legislature of Acts to authorize its construction, the Committee see no objection to their making the exploration upon the terms proposed, and are of opinion that every facility should be afforded to Mr. Fleming in making the desired exploration.



The Committee wish it to be distinctly understood that the Government of New Brunswick are not to be considered in any way necessarily committed to the conclusions at which Mr. Fleming may arrive. Any Survey to be binding upon them, must be conducted according to the terms of the Act passed at the last Session of the Legislature of New Brunswick, authorizing the construction of the Inter-Colonial railway.”

It appears then, that Fleming came into his position not - as Stevens has suggested - by virtue of his undoubted merit, but as the result of an uneasy political truce. Or was it as the result of something more sinister?

There is still no record extant to explain why Light did not get his chance to work as an equal on the railway survey. With New Brunswick clearly intent upon the spirit and letter of the 1862 agreement, and with Light available to work on the project by 1864, it seems he had indeed become the forgotten man. Newcastle would die later that year; Nova Scotia would seize the opportunity to have Fleming survey (and later construct) the long-promised Pictou branch of its own railway.

Contrary to Stevens' assertion, the selection of Fleming, insofar as the Pictou railway was concerned, was not popular. Indeed, his appointment took on a surreptitious aspect. It was made at the end of April of 1864, as the Legislature prorogued amid premier J.W. Johnston's program of "retrenchment," drastic budgetary cuts that affected the Nova Scotia railway, but did not prevent a cadre of Johnston party supporters from receiving "plum" public positions. Johnston himself was appointed to the Supreme Court bench as a sort of retirement reward.

Predictably, the Nova Scotian, while always having been a staunch supporter of Joe Howe's original scheme to link Pictou to Halifax by rail, railed against the employment of Fleming, and the subterfuge surrounding it:

"A large portion of the late Legislative session was occupied in the discussion of Railway policy of one kind or other. The result of it all was substantially "a Bill to authorize the construction of a railway from Truro to Pictou, the subsidizing of a company or companies to build a line East to the boundary of New Brunswick, and West as far and as much as they liked at so much as a gratuity per mile."

It seems to be generally understood that the Government are engaged in prosecuting surveys of the Pictou branch. We have made some inquiry on the subject, and the results are as follows: There are two sets of surveyors out - one working near Truro, the other near Pictou, - the former under a Mr. Tremain, a civil engineer of this city, of whose qualifications nobody in this Province has ever heard much, we suspect; - the other under a Mr. Hazen, a stranger, of whom nobody here has ever heard, and of course little or nothing could expect to be known. They may both be at the top of their profession, for aught we know to the contrary, only it seems rather strange after all that has happened in Nova Scotia, about errors, mistakes, big fills, bottomless lakes, and blunders of one kind or other, that we should be actually engaged in the disbursing of something like *two millions of dollars more*, under circumstances like these. Don't let it be

supposed that we wish to underrate the ability of these two engineers. Nothing of the kind. They may be each a Stevenson, or a Brunell, for aught we know, but we never heard of any eminently, scientific or engineering achievements, connected with either of their names."

The allusions to deep fills and bottomless lakes was a reminder that the newspaper had not forgotten the treatment meted out to the first engineer-in-chief of the Nova Scotia Railway, James Richardson Forman. These imagined obstacles had been cited by Howe's political opponents ten years earlier, as reason enough to dismiss the engineer. Only after the excessive verbiage of the tirade, did the editor get to the specific objection to Fleming's appointment:

"But we shall be told, probably - ay, ay, that may be so; but the Government have engaged Mr. Fleming, of Canada, as chief engineer - the person chosen to survey the site of the Intercolonial line, and the work is to be conducted under him. Exactly.

Now this is what we are coming to. We understand, and we have, we believe, the very best authority for what we are about to announce - namely, that for some time past Mr. Fleming, who, as the public are fully aware, has been, and is, engaged surveying and exploring a route for the Intercolonial Railway in the service and employ of Canada for that purpose, who has never, so far as we know, been in Nova Scotia but once, some time in April or March last - that Mr. Fleming is now, and for some time past has been, in the actual receipt of a salary of \$2,000 per annum paid out of the revenue of Nova Scotia! Here is a man who made a flying visit to Halifax some six weeks or two months ago, took a drive to Pictou with Mr. James MacDonald, and returned forthwith to Canada, made a bargain to receive L500 a year, and all expenses paid, with the understanding that he was to go back and conduct his Intercolonial survey. He, it seems, is to continue to draw a salary at the rate of L500 per annum, and as long as his work in Canada shall last. If he gets a good salary there, as no doubt he does, it will probably last a good while."

Even today the notion of public servants "double dipping" their salary is anathema to the electorate, and Fleming's apparent sweetheart deal with the new chief commissioner of railways (MacDonald had succeeded Jonathan McCully to the post) allowed the Nova Scotian to beat a drum in favour of former chief engineer Forman:

"Now suppose that Mr. Forman was about to be employed on the Nova Scotian lines, the Government of that day had agreed to pay him L500 a year and allow him to return back to Scotland to prosecute his profession there, it would have been an exactly analogous case to this; and what would have been thought of such an arrangement, and the men who made it? Just, we suspect, what the people of Nova Scotia will think of this, when they have been made aware of the fact. If Nova Scotia can afford to enter upon a work to cost half a million of money, surely there ought to be a master's eye and a master mind to plan and guide, duly inspect, control and direct the operation.

Would any firm, company or private individual enter upon a work of such colossal dimensions, and into such an engagement as we have described? Would not the person

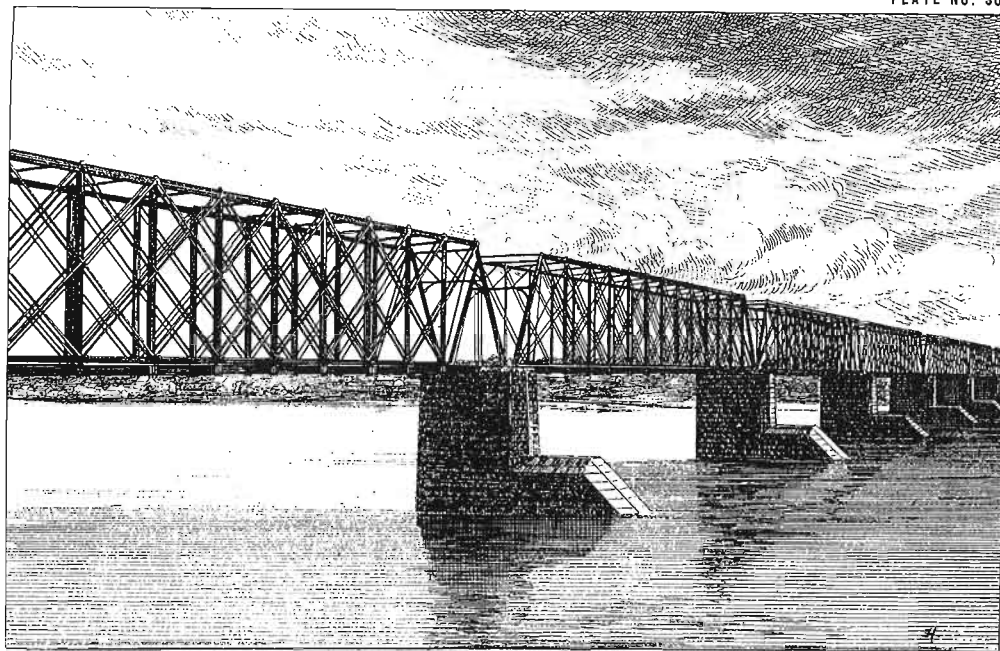


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SOUTH-WEST BRIDGE—RIVER MIRAMICHI.

*The bridge over the southwest branch of the Miramichi. The two spans over the river were the most challenging aspect of Light's work on the Intercolonial. (From Fleming's history of the Intercolonial.)*

who counselled such an act be regarded by shrewd men and capitalists as a fool, or something worse? If it be necessary to employ Mr. Fleming at all – if neither Mr. Tremain nor Mr. Hazen be fit to be trusted with this work. Mr. Fleming certainly ought to be on the ground, assisting to select the very best and cheapest line possible. At least, so it seems to us. It appears preposterous that Mr. Fleming, receiving full salary, as we suppose, from Canada, (for he had engaged himself there, and was at work before he was employed here,) – that Mr. Fleming at Boiestown, or the headwaters of the Miramichi, or Tamscouata Lake, or the neighborhood of River du Loup, searching for a suitable site for our Intercolonial Railway, should at the same moment be drawing pay from Nova Scotia for locating a line between Truro and Pictou. It does seem to us about as anomalous a thing as we ever heard of. Suppose that Lee, Longstreet or Beauregard were to accept an engagement in Mexico to resist French prowess there, and organize the Mexicans, and were actually to hurry away for that purpose, how long would they or either of them, hold command of the armies of the Confederate States? And yet that is exactly what our Government is doing as regards this Railway extension.

Well, so it is. Now what will the reply be? First, probably we shall hear that there is plenty of money in the Treasury. That is announced in the last issue of the Government organ. That £500 a year is a mere trifle to pay for the use of Mr. Fleming's name in connection with such an operation; Laurie had £1500. Then perhaps it will be said: Oh, yes, but Mr. Fleming can do the work of deciding as to the surveys and the best lines, just as well where he is, as if he were on the ground. Can he? Is it reasonable? If it be so, then let him come to Nova Scotia and decide the Canada line here. See how long how long the Canadians would stand that, or

retain his services on those terms! Such an answer would be nonsense. Tremain and his colleague may spend weeks and months surveying sections and sending them on to Mr. Fleming, only to be rejected, with orders for new sites to be surveyed and new sections to be sent."

Clearly an air of suspicion surrounded Fleming's work in Nova Scotia, but the fact of his appointment points again to his great ability to sell himself to politicians. There is, unfortunately, no record of the conversation that took place between MacDonald and Fleming on the drive to Pictou.

MacDonald was new to the job, and quite likely unfamiliar with the engineers who might have been available as Nova Scotia's candidate on the engineering triumvirate. Maj. Gen. Hastings Doyle was no stranger to Light; it was to his units that Light was attached in the aftermath of the *Trent* affair. Yet Doyle does not appear to have stepped in to support Light's nomination. This is almost certainly due to the protocol that prohibited an outgoing Lieutenant Governor (Hastings Doyle carried only the title of colonial administrator) from interfering with the prerogative of his successor. The new vice-regal, Richard Graves MacDonnell was equally bound by protocol not to interfere with the administration of the incumbent government of James Johnston and his lieutenant, Tupper.

If indeed, Fleming did sabotage Light's chance at the professional prize of building a railway for the empire, it was not an altogether unusual occurrence. In an history of the Intercolonial Railway, published in the December 11 1889 edition of *The Moncton Times*, an unnamed scholar, reflecting upon an early refusal by the colonial government to supply funding for the scheme noted:

"Earl Grey promptly replied that Her Majesty's Government were "not prepared to submit to Parliament any measure for raising the funds necessary for the construction of this railway." This was a sad blow to the hopes of Nova Scotia, and excited some astonishment. The adverse decision was generally supposed to have been due to the Report of an Engineer Officer, Captain Harness, addressed to the Colonial Secretary, hostile to the scheme of an Intercolonial Railway. It was naturally considered as singular by the people of the Colonies that the fine plan of national improvement designed by one Royal Engineer, after two years of examination and inquiry, should be so remorselessly scattered to the winds by another. They were unfamiliar then with the lively manner in which one engineer can rip up another's work and prove

the absurdity of the most cherished scheme of a professional rival. Smiles' *Life of George Stephenson* did not then exist, so the colonies of 1850 may be excused for their ignorance of the ways of rival engineers."

This analysis uncovered an unseemly side to the profession of the civil engineer, and the lengths to which one might go in order to gain an advantage over another for either a contract, or vindication of their design for a particular work.

To this extent, such actions were not "unethical" as engineers of the day understood the term. Indeed, there were few or no codes of ethics to bind engineers of the period. While there were many professional organizations in North America at the time, they were slow to adopt codes of ethics that might limit the opportunities open to their members.

The Engineering Institute of Canada, the national umbrella organization responsible for professional development was founded in 1887, as was the Canadian Society of Civil Engineers, too late to offer any censure to the rogues who might seek to make their names at the expense of their colleagues.

Regulation of the profession was left to the provincial and territorial societies, many of which did not come into existence until the early 20<sup>th</sup> Century. (Nova Scotia, New Brunswick, Quebec, Manitoba, Alberta and British Columbia all formed societies in 1920. Ontario followed in 1922, Saskatchewan in 1930, Newfoundland in 1952, Prince Edward Island and the Yukon in 1955, and the Northwest Territories 1978.) Even then ethical considerations were not a high priority.

In Nova Scotia, for example, the act establishing the Association of Professional Engineers of Nova Scotia (APENS), was not passed until 1922.

In Ontario, according to Alison Piper (*A Firm Foundation: History of the Professional Engineers Act*):

"In the period following the First World War, Ontario engineers from various disciplines became aware of their common interests, and decided to form an organization that would grant them professional status. An Advisory Committee on Legislation was formed to draft and secure legislation to govern the engineering profession. It comprised representatives of the American Institute of Electrical Engineers, Chemical Institute of Canada, Canadian Institute of Mining and Metallurgy, Engineering Institute of Canada, Ontario Association of Architects and Association of Ontario Land Surveyors.

However, passage of the Act was not achieved without compromise. Although the committee wanted the authority to license and discipline engineers, members of the legislature suspected engineers were using the pretext of protecting the public to get monopoly powers for themselves and refused to support licensure. As a result, the Act permitted only registration, not enforcement."

In the United States, one of the earliest professional bodies - the Boston Society of Civil Engineers - was founded in 1848 by James Laurie. Even Laurie was not exempt from the suspicion that he might scuttle a colleague's career. He was the engineer who came under fire when his 1856 report on the state of the Nova Scotia Railway, commissioned by a

government determined to be rid of its chief engineer, James Richardson Forman, served its purpose amply.

Now known as the American Society of Civil Engineers, that society's code of ethics today notes;

"From 1877 to 1914, the Society's Board of Directors believed that ethics was a matter of an engineer's personal responsibility and honor and not appropriate for a written code. In response to a motion concerning professional conduct in 1877, the board resolved "[t]hat it is inexpedient for the Society to instruct its members as to their duties in private professional matters. In 1914 a special committee of the Board of Directors was appointed to draft a Code."

Section 5 of the Fundamental Canons of that code states:

"Engineers shall build their professional reputation on the merit of their services and shall not compete unfairly with others."

Some groups waited even longer. The history of the National Society of Professional Engineers notes:

"The first reference to a Society Code of Ethics is found in the May 1935 issue of *The American Engineer* in the form of a suggestion for membership consideration. It is not clear whether the Society's Board of Directors ever adopted or acted upon the Suggested Code."

Even in Great Britain, the august Institution of Civil Engineers, formed in 1820 with Thomas Telford as its first president, was more interested in technical aspects of engineering rather than ethical considerations (Telford used the institution as a forum for the canal owners to lobby against the emerging railroads). The charter presents the goals of the institution in flowery prose, calling itself:

"...a Society for the general advancement of Mechanical Science, and more particularly for promoting the acquisition of that species of knowledge which constitutes the profession of a Civil Engineer, being the art of directing the great sources of power in Nature for the use and convenience of man..."

John Smeaton's Society of Civil Engineers, established in 1771, was more of a social club, but did hold its members to a high standard. In a 1996 essay on the history of the Institution of Civil Engineers, head librarian Michael M Chrimes notes:

"Smeaton came from a legal background, and from the first his own practice was distinguished by a code of professional conduct which would be virtually indistinguishable from today's."

Rule eight of the institution's 1975 rules of conduct, modeled on Smeaton's example states:

"A member shall not maliciously or recklessly injure or attempt to injure, whether directly or indirectly, the professional reputation, prospects or business of another person."

That is not to say such codes were strictly followed. Chrimes' history notes the institution's second president, James Walker, found himself the subject of a possible breach of the code:

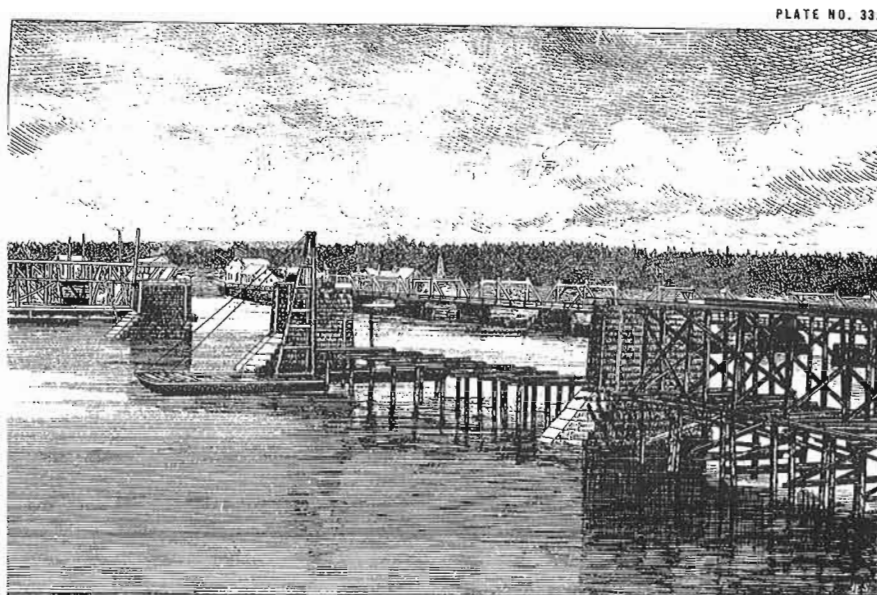


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NORTH-WEST BRIDGE—RIVER MIRAMICHI.  
(View of works in progress.)

*Construction of the bridge over the northwest branch of the Miramichi. The falsework necessary for six truss spans across the deep, rapid river, increased the chances of fatalities to workers. (From Fleming's history of the Intercolonial.)*

"The Institution can be seen to have acquired its mature form at this time - the early 1840s, and this was reflected in the deposition of James Walker as President in 1845. Walker had felt he would, like Telford, serve for life - but other members felt this was stifling the Institution and the ambition of younger members. There was some suggestion that Walker may have professionally benefited from his position, but Walker was very generous to the Institution, and very bitter about his treatment. However, biennial, and later annual Presidencies were indicative of a more mature body, less reliant on the prestige of an individual member."

Chrimmes notes that Walker's chief rival was the Number Two man of the organization:

"Walker particularly fell out with Manby. Charles Manby is well-known for his role as the first permanent full time Secretary, but he was heavily involved with other business interests, with Robert Stephenson and Company, and in the theatrical world."

Today, professional engineers in Canada are expected to follow the code of ethics set out by the Canadian Council of Professional engineers. The fifth tenet of the code calls upon them to:

"Conduct themselves with equity, fairness, courtesy and good faith towards clients, colleagues and others, give credit where it is due, and accept as well as give honest and fair professional criticism."

Clearly such regulation was the result of the recognition of an history of unfair, often corrupt, practices. The rivalry and chicanery, not limited to the engineering profession, puts the lie to the notion of Victorian era businessmen as paragons of integrity. Indeed, the engineering

profession at that time was a cutthroat business, with disagreements often spilling out of private offices and into the newspapers.

Fleming himself came under repeated criticism for his choice of the Chaleur route for the Intercolonial (although he had no real choice, it was the route preferred and insisted upon by the Imperial government) from New Brunswick engineers who saw more potential in the central route.

C.R. Hartley, a respected surveyor, made headlines in the March 13, 1868 edition of the *New Brunswick Reporter*. "Who is Hartley," the newspaper asked:

*"Well, Hartley is a gentleman who has received a telegram from Ottawa somewhat to this effect:*

*'Are you prepared immediately to take charge of a line of survey for the Intercolonial Railroad north of Fredericton under my instruction?*

*S. Fleming.'*

*Hartley is a gentleman who has set the ball rolling, which increasing in size as it rolls along, is destined to obscure the vain pretension of the North Shore as the great Intercolonial Highway. Hartley has shown by the result of his Railway resolutions in New Brunswick, that two-thirds of the province favour a more Central route, and he has shown to merchants and capitalists of Montreal the advantages of this route, that they have brought such a pressure to bear upon Mr. Cartier as he will find difficult to resist.*

*The fact the tide has turned, and is now setting with resistless force towards the Keswick Valley route."*

In its May 8 edition the same newspaper went on to compare Hartley's grades in the central region with those of Major William Robinson and Fleming:

"It stated on Mr. Hartley's authority, that he had been successful in finding a practicable and economical route across the height of land forming the water-shed between the Tobique and the Miramichi. This ridge supplied the chief arguments against several short routes proposed for the Railway. It has been the grand excuse for advocating the North Shore route, that by going round over the route surveyed by Major Robinson, the "ridge" in North-Western New Brunswick could be avoided. Major Robinson himself, in his report, was careful to bring out this argument, and every advocate of the long route since has rung the charges upon the story. Mr. Hartley's report, however, shows that the difficulties of grade in the way of a short route have been wonderfully exaggerated. He has surveyed about fifteen miles

of the most difficult section of the whole survey, and finds the average grade per mile only 43 feet....This is much more favourable than the result of Mr. Fleming's hurried survey, and much more favourable than Major Robinson's estimate of the grades in that locality."

The *Reporter's* editor, no doubt keen to promote a route that would pass by his home city of Fredericton, drove home his point proclaiming a final nail in the coffin of the contentious North Shore route favoured by Fleming:

"It may be fairly claimed that Mr. Hartley has succeeded in disposing of the bugbear of "the height of land." He has shown that it presents no greater difficulty than any other railways frequently encountered. He has shewn it can be crossed at grades which are not by any means unusual. As compared with the bridging and difficulties of the North Shore road, Mr. Hartley has proved the obstacles in the way of a shorter route to be almost insignificant."

In this matter, Hartley was supported by Walter Buck, another New Brunswick engineer who - in November of 1867 - had published a 10-page pamphlet, unsolicited by any of the governments involved in the construction of the railway, dismissing military considerations that played against the central route. Also entering the fray were engineers John O'Hanley and Robert Shanly,

Fleming was magnanimous in return; most of his critics - including Hartley and Buck - found work as divisional engineers at some point on the route.

Light, who offered no public criticism of Fleming's surveys - or complaint about losing the prized job - was similarly rewarded after he returned from England, newly-wed, in 1867. George Rose's 1886 biography (*A Cyclopaedia of Canadian Biography*, Rose Publishing Co. Toronto) notes:

"On his return again to England he became associated with Mr. Brunlees, Meadows Rendel and Berkley Bruce, eminent English engineers and operated with them in some very difficult and important undertakings."

He joined the engineering staff of the Intercolonial in 1869, as chief engineer for the Miramichi district, replacing W.H. Tremaine, a long-time Fleming associate who had most recently worked with the Engineer-in-Chief on the construction of the Pictou branch of the Nova Scotia Railway.

Immediately under Light was William Smellie, a veteran of the Nova Scotia Railway who had been dismissed in the wake of Laurie's report into the management of the railway, for his deliberate manipulation of estimates in order to hide overpayments to contractors on the Windsor branch in 1858.

The Miramichi district, as Fleming (or Grant) points out in his 1876 history of the project was not possessed of very difficult grades like the Restigouche district, but it did feature the formidable Miramichi River, necessitating construction of two magnificent bridges.

So complex was this work, that Fleming (or Grant) devotes an entire chapter to their construction, and a series of illustrations detailing their design. Each of the two bridges, labeled by Fleming as the north-west and south-west,

according to their positions relative to the river, required six spans of 200 feet, and massive masonry piers placed in the deep, fast-flowing river.

While the design of the bridges is credited to Fleming, it is Light who deserves the credit for ensuring the work was done on time, and did not create the kind of delays less challenging divisions elsewhere on the line caused.

Certainly the construction of the Miramichi bridges were fraught with danger. Fleming appears to have adopted the most frugal, and dangerous means of crossing the river, using truss spans rather than a suspension bridge.

Writing in *Design of Steel Bridges; Theory and Practice for the use of Civil Engineers and Students* (McGraw-Hill, 1915) F.C. Kunz notes:

"Simple truss bridges cease to be economical for spans over 700 feet., if the length of span is selected for smallest total cost, as the conditions which make an intermediate pier too expensive increase also the cost of erection falsework and the chances of accident during erection."

Written so long after the Intercolonial was completed, this warning would have been lost on Fleming, although the technology existed for suspension bridges at the time, and the philosophy was generally the same.

Indeed, it would seem Fleming was most comfortable with the truss bridge design, for all the bridges on the Intercolonial were of this pattern, from the small spans across the Missaguash at the Nova Scotia-New Brunswick border, to the larger bridges of the Miramichi and the Restigouche.

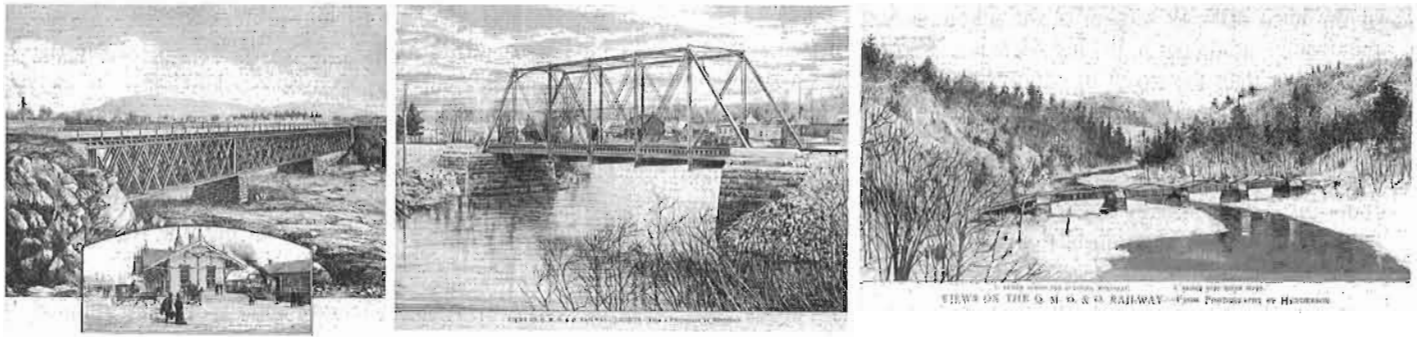
That there were no deaths associated with the Miramichi bridges and the massive falseworks necessary to build the piers midstream, speaks more highly of Light's talent than it does of Fleming's.

None of the engineers working under Fleming is given any praise for their work by the Engineer-in-Chief. Only Light comes close to an acknowledgement of his talent, but not for his work on the Miramichi.

The section of the European & North American Railway between Shediac and Moncton, completed by Light in 1860, before he left for his Brazilian venture, was incorporated into the Intercolonial's Nova Scotia division as Division U. Of that section, Fleming wrote:

"This section was opened for public traffic in 1860, and having been well constructed is in excellent order. The Engineer-in-Chief was Mr. A.L. Light."

It is perhaps all Light could expect of the man who may have usurped his position as overseer of what was then the largest, and certainly the most important construction project in the nation. Light left the Intercolonial engineering staff in 1874, after the Miramichi district was complete, two years before the line was finally opened to Montreal.



Some of the bridges over rivers along the line of the Quebec, Montreal and Occidental railway, built by Light in the years after the Intercolonial.

The Rose biography notes Light was immediately appointed government engineer of railways for the province of Quebec:

“...and as such had entire control of the construction of the Q.M. & O. Railway between Quebec and Montreal. Amongst other works, he is the consulting engineer to the Quebec and Lake St. John Railway, - a peculiar road differing essentially from lines running parallel to the St. Lawrence. It pierces the Laurentides, necessarily, with very heavy grades and sharp curves, worked by unusually heavy engines. In 1884 Mr. Light was chosen by the Dominion government as engineer in charge of the surveys of one of the divisions of the proposed Short Line Railway, from Montreal to Saint John and Halifax. His bold, able and vigorous advocacy of the line via Quebec, the Etchemin valley, and Chesuncook, by which he claimed he could get grades not exceeding forty feet per mile, gave rise to a warm discussion in the House of Commons. Mr. Light is now engaged with James Brunlees, C.E. of London, England, in forming a company for the construction of a Cantilever bridge over the St. Lawrence at Quebec, for which he has prepared the plans and specifications. This bridge will have a clear span of 1,550 feet, a length of steel superstructure of 2,800 feet, a total length of bridge and arched approaches of 3,460 feet and a clear height above tide of 150 feet. When accomplished it will be one of the grandest engineering achievements of the world, and Mr. Light’s professional skill amply qualifies him to carry out the same to a successful conclusion. This distinguished gentleman has made for himself an enduring name in his profession, and several great public enterprises in this country are under no little obligation to his skill. He is yet in the zenith of his physical and professional powers; and we doubt not that brilliant achievements still await him.”

There was a great deal of irony in Rose’s final prediction for Light. The Brunlees company was not successful in obtaining the contract for the bridge at Quebec, it went instead to a group of local capitalists who incorporated the Quebec Bridge Company in 1887, and threw their lot in with the Phoenix Bridge Company of Pennsylvania to come up with a design and a contractor.

The project was fraught with peril. The only practicable place for a bridge was a point seven miles upstream from the Citadel, where the river narrowed to less than three-quarters of a mile, flowing between high cliffs. The water was 190 feet deep, and the current flowed at close to seven miles an hour.

The end result for the company has been well documented in John Tarkov’s case study *A Disaster in the Making*, (*American Heritage of Invention and Technology*, Spring 1986); the span designed by the American engineer Theodore Cooper took a matter of seconds to collapse into the river in 1907.

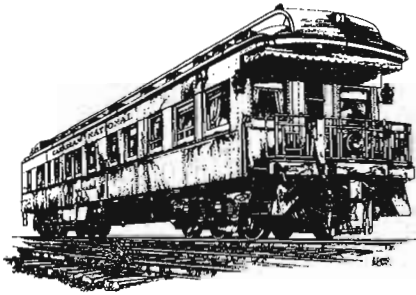
Cooper had been brought in because the company’s chief engineer, Edward A. Hoare, had never worked on a bridge with a span longer than three hundred feet. Light, on the other hand, had experience both in New Brunswick and Brazil with long spans. Cooper was not without talent, but as Tarkov notes:

“The projects he undertook ... were notable and prestigious. His works included the Seekonk Bridge in Providence, the Sixth Street Bridge in Pittsburgh, and the Second Avenue Bridge in New York. He moved through the most rarefied atmosphere of his profession, but unlike his mentor [James Buchanan] Eads, he never oversaw a truly heroic masterwork. The Quebec Bridge, viewed in that light, was irresistible to Cooper. He said the bridge would be his last work. It would stand as the crowning achievement to an elegant career.”

Light also had no “crowning achievement,” although he certainly had a magnificent, if unheralded career. If it galled him that his opportunity had been taken from him by the machinations of Fleming, he appears never to have said so. But it is interesting to wonder if - had he been the engineer-in-chief of the Intercolonial as originally promised by Lord Newcastle - would he then have gone on to survey the route for the Canadian Pacific, as Fleming had done.

Alexander Luders Light died in 1894, nine years after the driving of the last spike, Nov. 7 1885 at Craigallachie. Did he ever think it should have been him looking over the shoulder of Donald Smith in that historic photograph?

## The Business Car



### BUDD CAR COMMENTS

Mr. Gordon D. Jomini has written the following very interesting comments concerning our recent Rail Diesel Car issue:

Sunday, 11 May 2003

A copy of the November-December 2002 Canadian Rail all-RDC issue finally made its way into my hands. RDCs have become something of a hobby all on their own with me. I spotted three points of contention in the issue.

[1] The CN roster repeats the myth of Grand Trunk Western RDCs. There were no GTW RDCs. See the note about CN #s D-204 and D-303 towards the bottom of page 13 in Lepkey & West's CNR Passenger Equipment. Nor was there ever any GTW RDC service.

[2] The total of 404 RDCs built is questionable. The information I have shows the demonstrator plus 397 cars, total 398 cars. That includes the cars built new for Australia, Brazil, Cuba and Saudi Arabia and the cars sent to Canadian Car & Foundry for completion [December 1968 Trains magazine and Budd records from Ray F. Corley].

The RDC round-up in the December 1968 Trains also cites the 404 cars figure, and so it has puzzled me for some time. It finally occurred to me, literally only a few minutes ago, that the 404 cars includes the New Haven six-car Roger Williams train, and that leaves me somewhat uneasy. I think I'd prefer calling those cars "RDC-based," not RDCs. Your thoughts?

[3] "There never was an RDC dining car" while true in Canada, overlooks the Baltimore & Ohio factory-built dining-RDC-2s.

While I have your attention, a young computer whiz named Jeff Pinchbeck, Dale Wilson in Sudbury (he gave me your e-mail address) and I are trying to massage Dale's Canadian Pacific passenger equipment roster into a form suitable for publication. A question has come up

about the CP RDC-2s. Why did the CP buy so many RDC-2s? Were the cars really intended for checked baggage? Or to provide a modicum of passenger protection in the likely event of front-end grade crossing collisions?

A more troublesome question has come up about the CP RDC-3s and RDC-4s. My understanding is, only CP RDC-4 # 9200 was delivered with a fitted-out mail "apartment." The trouble is, we do not have proof. Note 7 on page 24 in Ray F. Corley's book *The Budd RDC in Canada* tells us, "Mail section used for baggage in cars 9020-9024 and 9250-9251." But the book was published in 1967, and so Note 7 is not absolutely clear about the initial (as-built) equipment. And we only have the "B" revisions of the CP RDC equipment diagrams. The original "A" equipment diagrams have not surfaced despite Dale putting out a call on the Internet. Nothing definitive came of it.

We also have conflicting capacities for the mail and baggage sections. Got any ideas about tying these details down? I wonder if the weight capacities of the mail and baggage and combined mail and baggage sections were somewhat arbitrary.

Finally, about the RDC-3s and RDC-4s the CN and (maybe) the CP ordered without mail handling equipment: seeing as how the small mail door wasn't going to be used for mail, did either railway ask Budd about enlarging the small mail door?

Thank you, and best regards,  
Gordon D. Jomini.

### THE EDITOR'S COMPUTER WOES

Recently your editor has had serious problems with the computer used to produce Canadian Rail. For six weeks there have been mysterious crashes in the system which have made it almost impossible to do significant work on the publication. The problem has been traced to a defect in the modem used to connect to the internet. Yesterday a new computer was installed, of much higher capacity than before, and this issue has been completed on the new system. However there is still no internet connection, and this will not be available for at least three weeks. In the meantime, we have decided to produce this issue in a somewhat abbreviated format, without our usual variety, in the interest of getting it out with a minimum of further delay. The missing pages will be made up in a future issue. Please bear with us.

Fred Angus, Editor. June 17, 2003.

*BACK COVER TOP: Toronto Transportation Commission car 2628, a Brill Witt, at Queen's Quay on May 16, 1950. Photo by William Bailey*

*BACK COVER BOTTOM: Former British Railways A-4 Pacific No. 60010, "Dominion of Canada" being unloaded at Montreal on April 26, 1967. Photo by Fred Angus*

# Canadian Rail

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